INSTITUTE FOR RESEARCH IN SOCIAL SCIENCE

SOUTHERN
TEXTILE BULLETIN

Vol. 40 Charlotte, N. C., March 5, 1931 No. 1

INSTITUTE FOR RESEARCH IN SOCIAL SCIENCE

Durene

Fashion's Own

Dame Fashion has made cotton her own, and shows her special favor in the myriad uses she finds for the workability, sheen and wearability of Standard-Coosa-Thatcher Durene—a mercerized yarn of inherent quality.

Write for latest Color card

STANDARD-COOSA-THATCHER CO.
CHATTANOOGA, TENNESSEE
Executive and Sales Office: LAFAYETTE BLDG., PHILA., PA.

Alphabetical Index to Advertisers Page 50

20th Anniversary and Annual Review Number

Selected

Cotton Fabrics

for

Manufacturing Trade

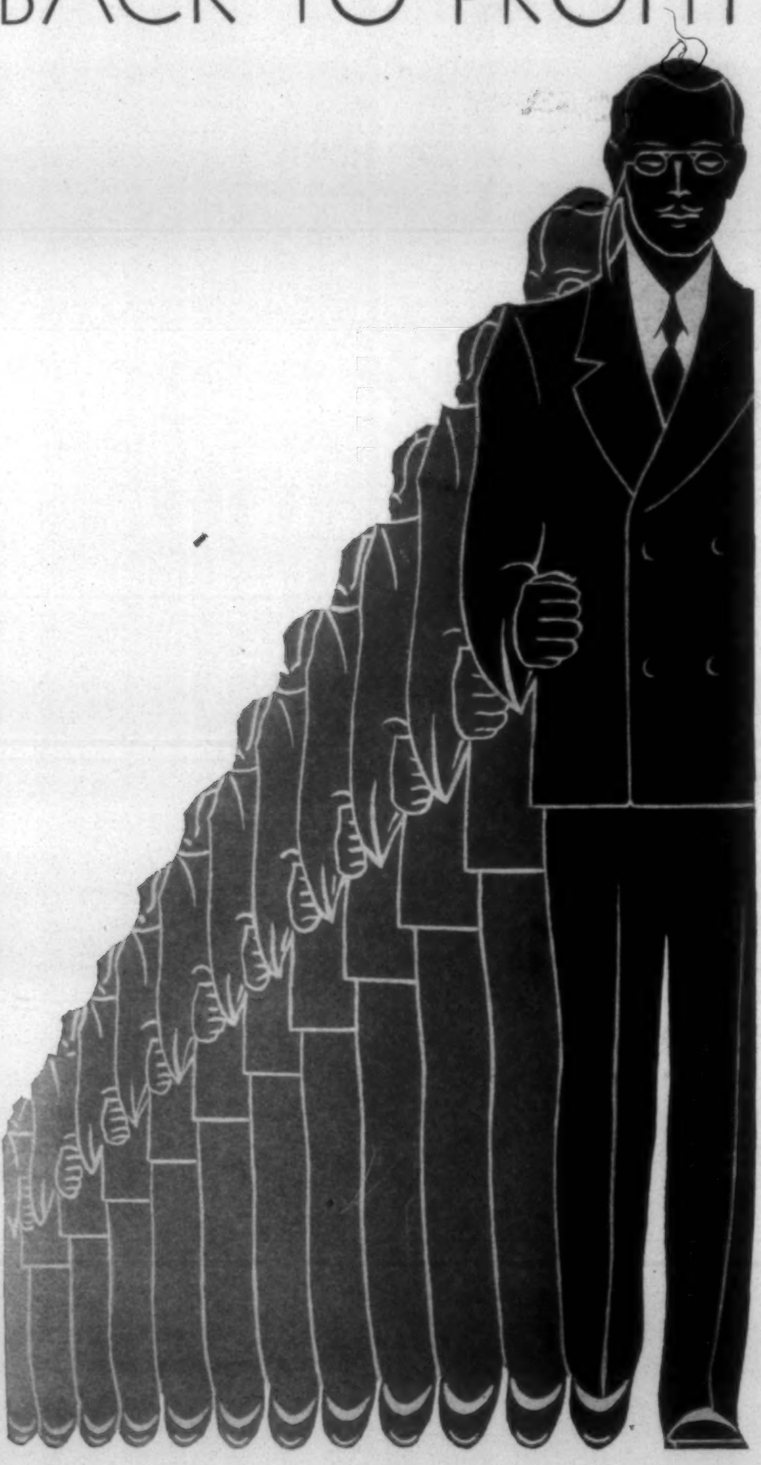
CURRAN & BARRY

Selling Agents

320 Broadway **New York**

Telephone: Worth 6800

LEADING the PARADE BACK TO PROFITS



MACHINERY may or may not be your vital textile problem at the moment. Possibly *Styling, Distribution,* or the *Purchase of Raw Materials* may be your present major worry. Obviously they require much attention.

● But if you have not already started on a loom replacement program, it will shortly be necessary. Those who have launched a replacement program involving C & K precision looms are certain to lead the parade back to profits. Even though we continue in a buyer's market and prices remain where they are, the savings from these new looms represent very respectable profits in themselves. These are not mere words but proved facts.

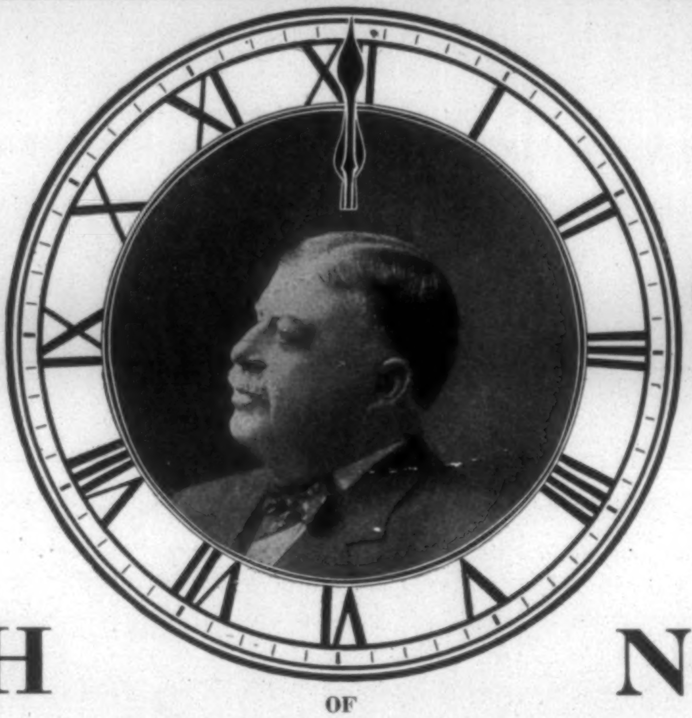
CROMPTON & KNOWLES LOOM WORKS

LOOMS FOR COTTONS, SILKS, RAYONS, WOOLENS, CARPETS AND RUGS, BLANKETS, JACQUARD FABRICS, ASBESTOS, LINENS

Allentown Paterson Philadelphia WORCESTER-PROVIDENCE S. B. Alexander, So. Mgr., Charlotte

803/46

MASSACHUSETTS CHARITABLE MECHANIC ASSOCIATION
AWARD TO
Noone & Cochrane
for
3 PLY
Roller Cloth.
Exhibition of
1853.



HIGH NOON
OF
EXPERIENCE and SKILL
in the MANUFACTURE of
MECHANICAL CLOTHS
Is Typified in the Product of
THE JOSEPH NOONE'S SONS COMPANY
ALBERT W. NOONE, Prop. A. ERLAND GOYETTE, Manager
The Oldest Manufacturers in this Country of
Roller, Clearer and Washer Cloths, and Slasher and Sizing Flannels for Cotton Mills, Printers' Blankets, Piano Cloths and Laundry Blankets
Every Description of Woolens and Linen Cloths for Machinery
Ask and Insist that Noone's Cloth Be Used
WILLIAM R. NOONE & CO., Selling Agents, BOSTON
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N.H.
State Agl. Society
— to —
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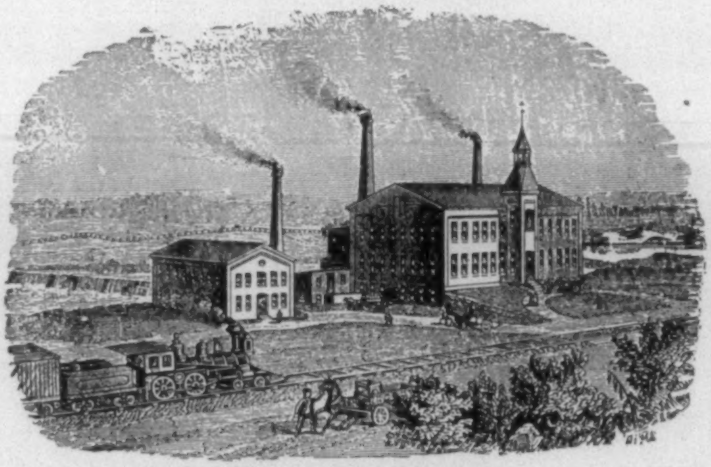
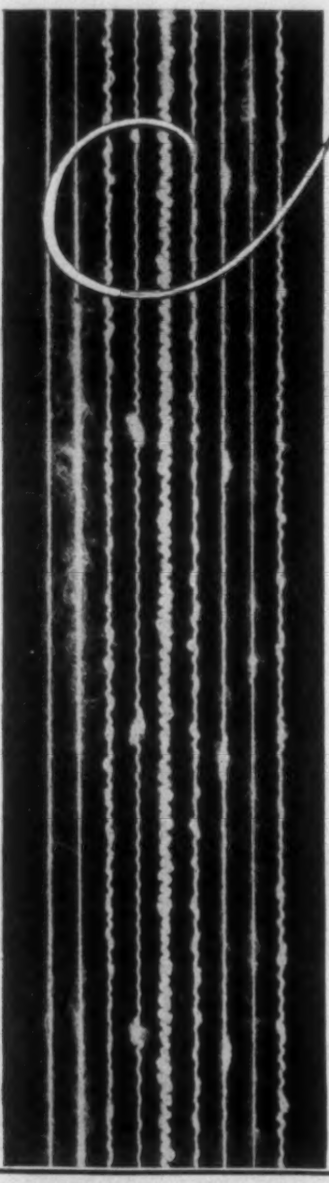


FOR
Woolen Cloth
1853

Mills
PETERBOROUGH,
N. H.

ESTABLISHED 1831

Office
105 WASHINGTON ST.
BOSTON, MASS.



Novelty yarns are profitable

Chic fabrics are always in demand. But today, competition is so keen and styles so exacting that color alone is not enough. Smartness must start with the fabric itself — it must be built into the very yarns. There is no limit to their variety in design, color combinations and in materials. They place at the fabric designer's disposal the advantages of all textile fibres - silk, wool, cotton, worsted, rayon.

Beautiful novelty or fancy yarns can be made by any mill equipped with Whitin Fancy Yarn Machines. They are simple, adaptable, inexpensive. Send for our latest booklet which carries the whole story - a story of new profits for the modern mill.

WHITIN MACHINE WORKS
WHITINSVILLE, MASS., U. S. A.
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Fales and Jenks Division
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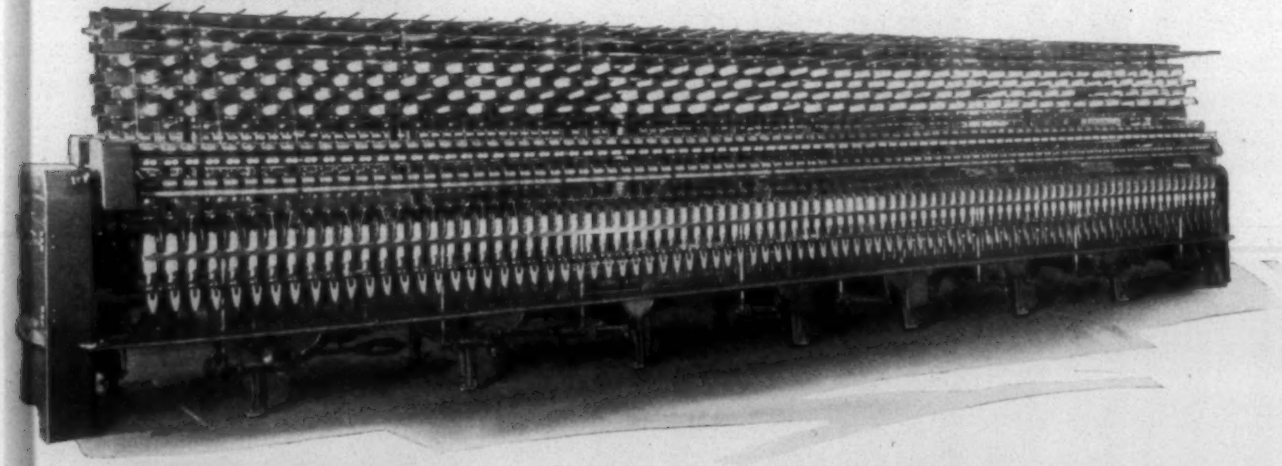
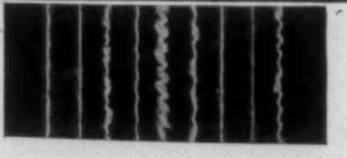
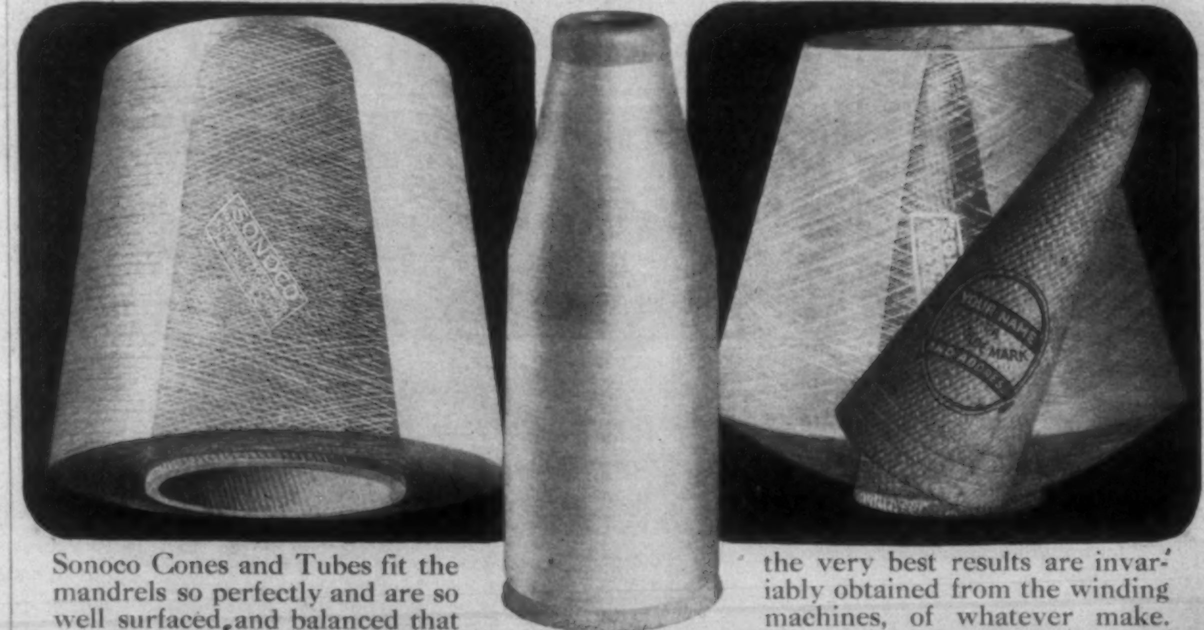




This is a Whitin Fancy Yarn Machine.
Hundreds are in daily use.

Let us know Your Requirements
or Send us samples of what you are using.



Sonoco Cones and Tubes fit the mandrels so perfectly and are so well surfaced, and balanced that the very best results are invariably obtained from the winding machines, of whatever make.

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HARTSVILLE, S. C.
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Velvet Surface Cones, Underclearer Rolls, Dytex Tubes, Etc.
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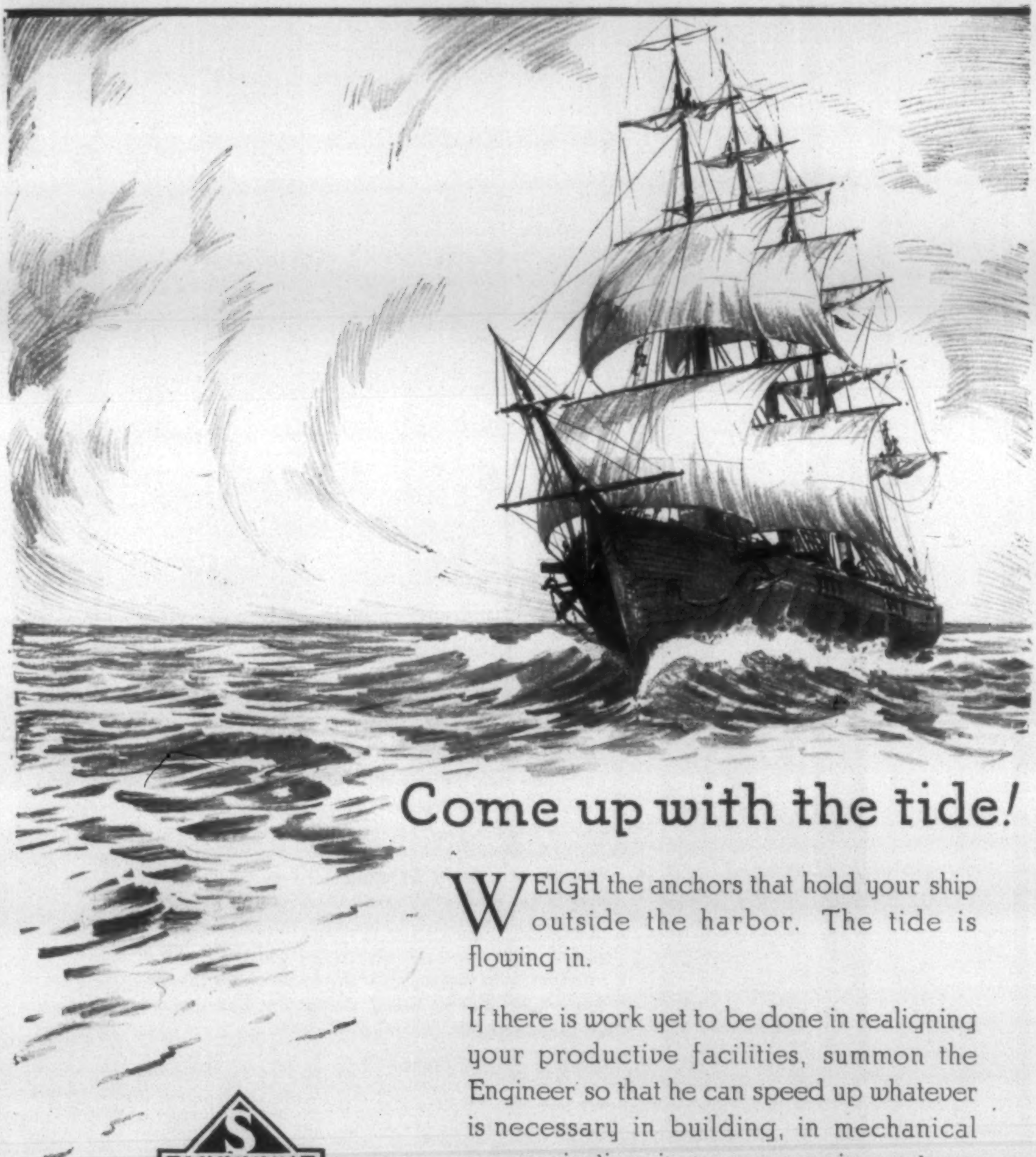


Come up with the tide!

WEIGH the anchors that hold your ship outside the harbor. The tide is flowing in.

If there is work yet to be done in realigning your productive facilities, summon the Engineer so that he can speed up whatever is necessary in building, in mechanical reorganization, in power requirements or in other fields where his counsel and work can help you make more profit, better product or the same product for less.

Textile Mills
Reorganizations
Warehouses
Surveys
Rayon Plants
Tobacco Factories
Steam Plants
Examinations
Water Supplies

General Industrial Plants
Production Studies
Hydro-Electric Systems
Appraisals
Sanitary Engineering
Power Application & Lighting

J. E. SIRRINE & COMPANY
Engineers
Greenville South Carolina

Enka's Steady Rise In Output

Results of Quality Yarn

THE FATE OF A FABRIC HANGS BY A THREAD

A GLANCE at the beautiful fabrics and knitted goods made of Enka yarn—and you have the answer to the quick growth of American Enka. Since the beginning, Enka yarns have been much in demand. Even in the notoriously bad year just passed, American Enka operated at steadily increasing capacity with no surplus stock of yarn carried into this year.

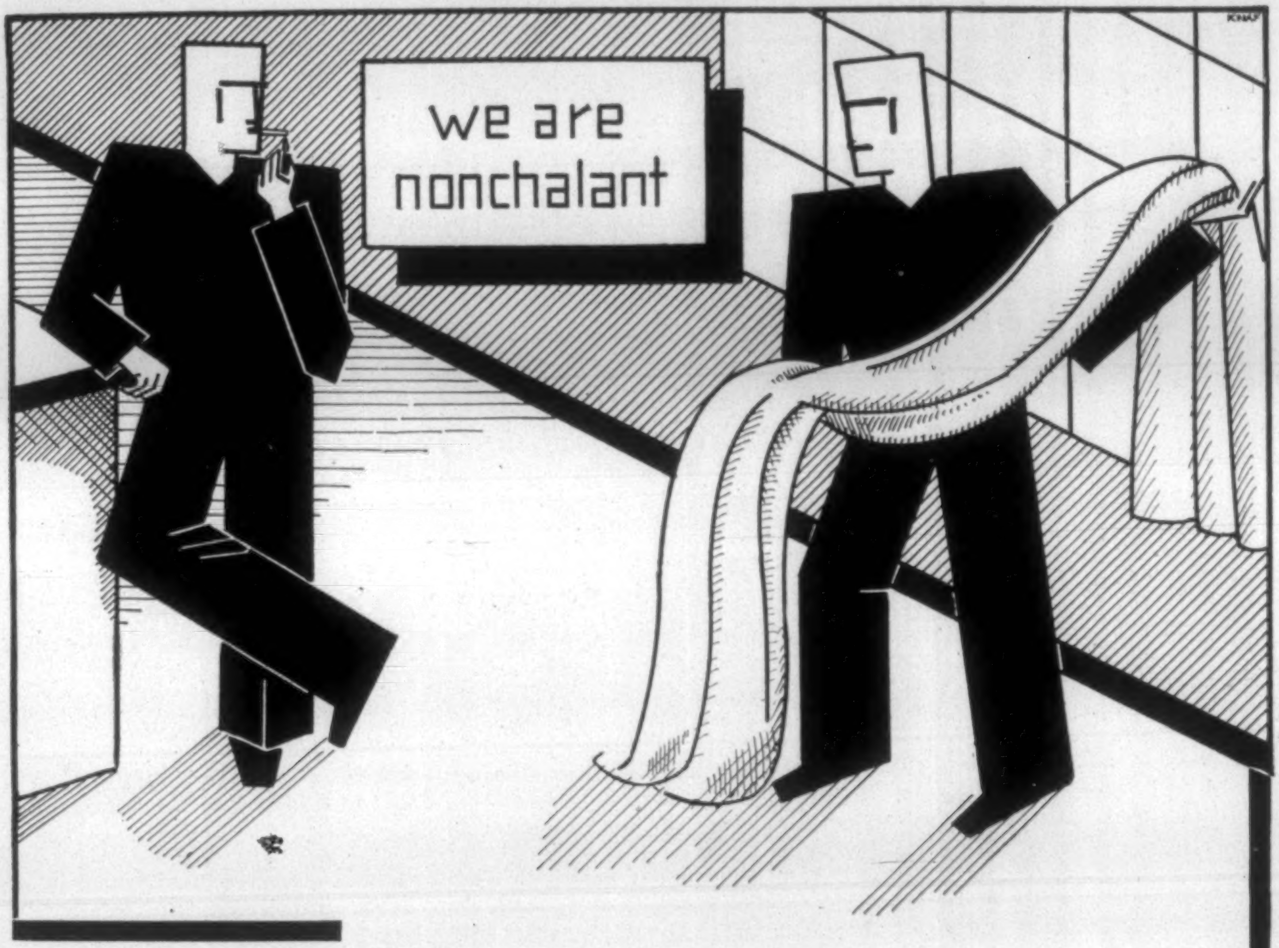
The fate of a fabric hangs by a thread—that is why an ever larger number of weavers and knitters are looking to Enka yarns for high volume output. The prominent houses who have used Enka yarns testify to its uniform quality and its adaptability. Enka yarn is dependable. It is processed correctly. It is extra strong, wet or dry, and takes dye exceptionally well.

Mill men and converters who are looking for the unusual will find our technical and merchandising department a source of profitable ideas. Right now we are working on new things for summer and fall promotion. We will be glad to send one of our men to your plant to tell you about these. We suggest also that you see the Enka yarn exhibit at the Knitting Arts Exhibition in Philadelphia in April, and talk with our representatives there.

Enka yarns are available in deniers from 50 to 300, in standard or multi-filaments, on cones or spools, in skeins, bleached or unbleached. Very soon our new extra dull lustre yarn will be ready.

AMERICAN ENKA

AMERICAN ENKA CORPORATION
200 Madison Avenue, New York City
CANNON MILLS, Sole Agents,
Philadelphia — New York — Providence
Chicago — Chattanooga — Kannapolis



The deciding moment—

When confronted with troublesome dyeing and complaints about fastness—**be nonchalant!**

We retain our composure, light a Murad, and turn to G D C for dyestuffs, specialties and service.

GENERAL DYESTUFF
CORPORATION
230 FIFTH AVENUE
NEW YORK, N. Y.

GDC

BRETON MINEROL PRODUCTS

FOR FIFTY-FIVE YEARS...

our business has been, to manufacture and supply to the industries, lubricating oils and greases.

Whenever a special need arose, we made it our special task to provide the proper lubricant for that particular purpose.

When the wool spinning industry found difficulty in obtaining oils for wool that were uniform in quality, free from danger of spontaneous ignition, and would scour out, leaving a clean, sweet fabric, we originated BRETON OILS for WOOL.

When the leather tanners demanded better, clearer leathers, free from stains and of stronger fibre, BRETON OILS for LEATHER was our answer.

In the cotton mill, a dripless machine lubricant that would not require heat to melt, and would not increase the starting torque, was needed. BRILLIANT OIL AX was our reply.

The development of the steam turbine required a better oil; . . our ENDURANCE Brand TURBOIL has run nearly twenty years without replacement.

The demand for odorless silk-like finish on cotton fabrics was met with the product . . BRETON MINEROL F.

For the heavy-duty twisting of cords for tire manufacture, a grease was needed, that would lubricate the traveler over 1200 miles at one application. BRETON TWISTER RING GREASE does just this.

When Uncle Sam needed, during the War, something to get his ships into the water quickly and surely, we developed for him . . PARAGON LAUNCHING STEARINE and GREASE.

Then . . when the cotton spinner demanded better conditions in his mill . . cleaner cotton and better yarn, we naturally interested ourselves and developed the "BRETON MINEROL" PROCESS.

BORNE SCRYMSER COMPANY
17 BATTERY PLACE, NEW YORK

4 *Important Features of our* New

EAGLE STARCH

Improved equipment and processing have achieved

1 Greater uniformity of moisture content and fluidity of paste. While Eagle Starch always has been approved for its uniform quality, the new Eagle Starch is controlled within still narrower limits. Every package is absolutely uniform in moisture and fluidity.

2 Reduced sediment or residue. Especially designed equipment has resulted in the elimination of practically all sediment—which means smoother, cleaner size. Try a "creaming" test.

3 Absence of soluble substances which have no starch value. By additional washings, soluble impurities have been removed from the new Eagle Starch.

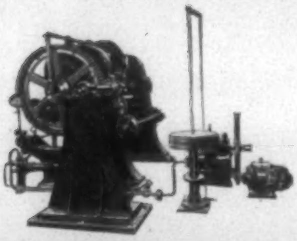
4 Cleansing of the air used for drying starch is an innovation. In manufacturing the new Eagle Starch, the finest particles of dust and dirt that are in the air are removed prior to using this air for drying Eagle.

For best results, always be sure that starch is thoroughly "creamed" by stirring with cold water before admitting steam. For further information, please write

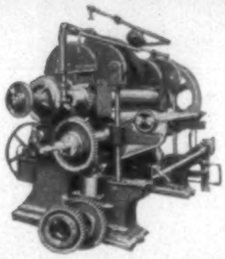
CORN PRODUCTS REFINING CO.

17 BATTERY PLACE, NEW YORK, N. Y.

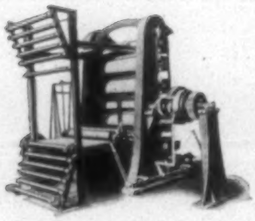
Branch Offices: **Philadelphia, Pa.—Boston, Mass.—Greenville, S. C.**



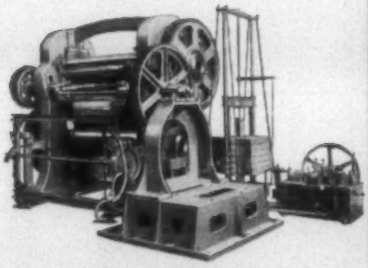
3-Roll Hydraulic Calender with Direct-Driven Pump and Accumulator



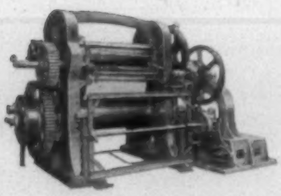
Schreiner or Charmeuse Calender



6-roll Hydraulic Chasing Calender Open face type



3-roll Hydraulic Friction Calender



3-roll Friction Calender

The Installation of one or more of these Butterworth Machines could easily be the Answer to Your Question of

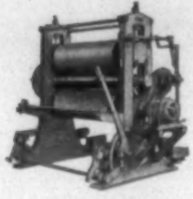
—"How can we lower our finishing costs?"

IF your finishing costs are too high it could be that your machines are not modern, or

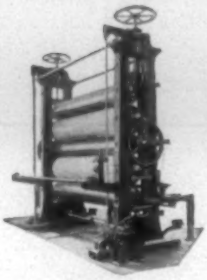
Because they are not properly placed for speedy and economical production.

In either case a plant survey by our engineers will prove valuable. Such a survey can be made quickly, and our recommendations, backed by Butterworth's 111 years' experience in the textile industry, will of course be authoritative.

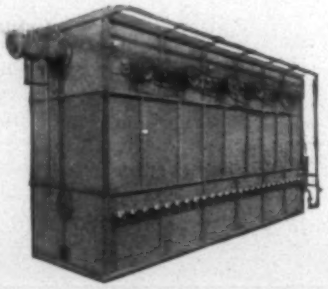
Results of all surveys are held in strictest confidence.



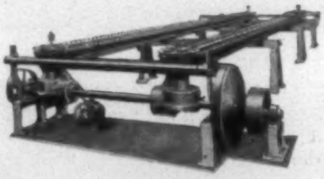
3-roll Silk Calender Direct-Motor Driven



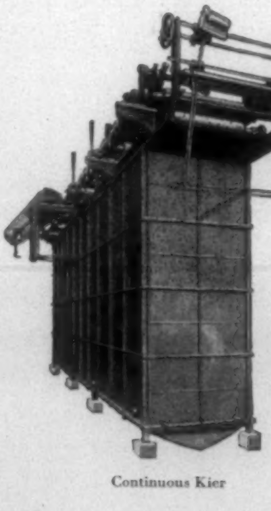
5-roll Calender with Hydraulic Jack



Ager



Anti-Friction Tenter



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BUTTERWORTH *Finishing* MACHINERY

A COMPLETE LINE OF FINISHING MACHINERY FOR THE TEXTILE INDUSTRY . . . . .

SOUTHERN
TEXTILE BULLETIN

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VOL. 40 CHARLOTTE, N. C., MARCH 5, 1931 NO. 1

Then and Now
1911 1931

THE first issue of the Southern Textile Bulletin was published March 2, 1911. This week's issue therefore marks the 20th Anniversary of our publication.

A great many changes have taken place in the textile industry during these years. Many of these changes are referred to in the following letters from well known mill men.

These letters make a very timely and appropriate feature for our 20th Anniversary Number and we are very appreciative of the friendly spirit which prompted them. —Editor.

In giving my observations on the changes in machinery methods and mill conditions during my experience, I would say in reference to machinery that the change from the old way of weaving with the plain loom and the threading of the shuttle by sucking the end of the filling yarn thrugh the eye of the shuttle, to the present automatic loom impresses me, I believe, more than the many wonderful changes that have been made in all lines of cotton mill machinery as compared with the older methods. This is more important than such changes as new methods of cleaning cotton, one process pickers, modern carding, high speed spooling and warping, high speed long draft spinning, with the traveling fans to keep them clean, as compared to the mule spinning, and the old method of fanning off the frames with a cloth; also the advantages of modern systems of humidifying as compared to no system at all, except probably taking a garden watering pot and sprinkling the floor between the lines of looms in the warp alleys; modern temperature control on slashers as compared to the hit and miss plan; direct electric drives as compared to long lines of shafting, counter shafts and belting; the modern turbine as compared to the old style engine, and probably other things which I don't recall just at the moment, I still think better facilities for lubricating cotton mill machinery should be worked out by the machinery builders. The above improvements have been the means of increasing the capacities and earning power of the operative with realy less effort.

Now as to some present-day conditions as compared to the past. Probably the change in the age of minors now working is one of the most important. Hours of work have changed materially, both as to length of time for the operator; that is, from about seventy-two hours per week for a day run, to fifty-five hours; and for the mill from seventy-two hours per week to sometimes as much as a hundred and twenty-five hours in some places and under some conditions, since the starting up of night runs. Wages have changed from nothing (while learning) to peak times during the world war when there were cases of a woman spinner earning more than the overseer. Pay days used to be once a month instead of weekly, as at present, and while it used to seem a long time between pay days, the wage earners who worked regularly had one advantages which they do not have now, viz., a reserve of a month's wages.

The living conditions have changed from a house with one by twelve boards running up and down with a one by three strip over the cracks and no conveniences to (in the latest villages) houses splendidly built with modern conveniences, such as running water, sewerage connections, electric lights, etc., and rent only about one one dollar per month per room, against no rent years back.

Schools and churches have kept pace with the other improvements: from the old frame school building, rather modestly equipped and heated by stoves, and with inducements of ten cents per week paid the children to encourage attendance, to fine brick buildings, well equipped and steam heated, with overflow attendance; and from the frame union church with irregular services, to fine buildings, and generally each denomination's having their own building with services each Sunday. Many mill villages also have community houses, lodge and Y. M. C. A. buildings, or halls and libraries.

With the above advantageous changes have come some changes not so welcome, such as the tendency to over-tax and over regulate the textile industry; the loss of valuable export business; keen competition which seems to result in over-production and lower prices for goods, which means less profits with which to pay the increased taxes, even up the loss in the export business and leave something for the stockholder.

The coming of the boll weevil has had its effect on the quality of cotton so that instead of buying practically all cotton locally as was done years ago, mills have had to look to the west for the better and stronger staples; but fortunately there have been efforts to remedy this trouble by using proper seed and fertilizers and these efforts began to show good results this past season, which if continued will no doubt ultimately be a great advantage to the farmer as well as the mill.

One condition in most of the Piedmont section which has not changed, and which is well that it has not, is the fact that the mill help is native and not foreign.

Trusting that the above is of interest, and with appreciation for the part you have played in helping to improve conditions both for the operative and the management, and with kind personal regards, I am, *Lewis D. Blake, Pres. and Treas., Belton Mills, Belton, S. C.*

Machinery has undergone many changes during my thirty-odd years in the cotton mill. During the early years of the industry, many mills fed cotton straight from the bale to the breaker picker hopper without any preparatory or opening machinery. Card hands tended fewer cards, but carried their own laps, did their own stripping and doffing and all cleaning. Many mill men remember the old stationary top flat card and the job of stripping. Many readers of this article can harken back to the days when the palm of the card tender's left hand resembled a mule's hoof from pushing the cylinder while he was stripping with a hand card held in his right hand.

Another machine now extinct is the old time railway head. No piece of machinery now in the mill has occasioned more bad work and bad temper than the old railway head. It is needless to mention how thin places made thick places and thick places made thin places in the sliver coming from this machine.

The elimination of crude processes such as these is largely responsible for the fact that workers today tend more machinery with greater ease than in the old days.

Many of the old-timers will also remember with a shiver, doffing the old stationary flyer fly frames and how little production they turned out in proportion to the amount of work done. All machinery in those days was so slow that a mill was bound to run many more hours than now in order to turn out enough product to show and profit at all. But the mill owners have been generous. As faster and more efficient machine processes have speeded up production they have reduced hours per week. The writer is equally familiar with the 72-hour week of former years and the present 55-hour week, and remembers when nobody but a small boy could afford to doff in the spinning room for the wages of that job. Now men support families on a doffing box. The present doffer gets three times as much production and five or six times as much pay in comparison with the doffers of twenty or thirty years ago. Furthermore, a weaver runs four to five times as many looms on the same fabric as he did in those days and receives 20 per cent more pay per loom. He no longer has to use the suck threading shuttle, in fact he doesn't have to thread his shuttle at all.

The suck threading shuttles bring to mind other great improvements in sanitary conditions. The present refrigerating system that keeps the drinking water from a modern filtering plant the same temperature in August and in December is a tremendous improvement over the old common dipper and water brought in from a surface well. Dysentery and fever brought on by surface wells adjacent to surface privies are things of the past. Some mill owners have taken advantage of the knowledge gained by the Government in building the Panama Canal in remedying sanitary conditions. The writer remembers when an expert from the Canal Zone was brought into the mill village and established the same drip can system as was used there to exterminate the malarial mosquito.

The community spirit of modern mill villages has steadily grown. As time goes on the desire for more facilities for physical education, recreation and amusement has brought about large and modern community buildings, Y. M. C. A.'s, night schools and trained staffs of instructors.

All in all the changes in machinery and methods, sanitation and living conditions have fully kept pace with the rest of our national progress.—*James A. Bangle, Superintendent, Proximity Cotton Mills, Greensboro, N. C.*

In the past 20 years there has been a great improvement in machinery, especially since the war. With the present improvements, the work of the operative is lightened, and he can operate more machines and make more money.

The Barber-Colman warpers and spoolers are a great advantage in making good yarn and, of course, the looms run a great deal better. The long draft spinning increases production of yarn so that we can run more looms than we could heretofore. Much progress has been made in the generation of power, also.

Since I have been in the business, we have never operated over sixty hours a week. I believe Capt. E. A. Smyth, at Flat Rock, N. C., is the only man still in the business, who was in the cotton mill business when they ran sixty-six and seventy hours a week.

I don't remember ever seeing top-flat cards operated, but I do remember five-cent cotton. However, I was a merchant at that time, and not in the cotton mill business.

I wish you great success in getting out your work. With regards, I am—*Aug. W. Smith, President, Brandon Corporation, Greenville, S. C.*

Will you kindly permit me to extend my congratulations to the Southern Textile Bulletin's Twentieth Anniversary and to also wish it and yourself many, many more years of useful service to the Textile Industries.

Southern cotton manufacturing has gone a long way since the first issue of your paper and its influence has had much to do in the improvement of manufacturing conditions. Those of us who can look back twenty years or more can hardly realize the vast strides that have been made in both the mechanical operation of cotton mills and in the increased efficiency of our operatives. Thirty years ago, it was admitted that New England mills could pay higher weekly wages and still have a lower labor cost than we had because of a larger production per operative. Today this is reversed and our Southern operatives will produce more than their Northern rivals. What a difference there is in the working conditions of today as compared to thirty years ago. One who has only worked in our modern, well lighted, well ventilated and scientifically humidified mills cannot conceive of the difficulties of those who labored for a sixty-six or seventy-two-hour week in a plant that was low posted, dark, hot in summer and cold in winter, perhaps damp with live steam that was turned on to kill static and the air still further devitalized by kerosene lamps or gas after lighting time. Some of our best mills at that time compare very favorably with those of the present and in fact most of the mills now running that were running then are those that mark the beginning of progressive manufacturing. The single flyer speeders stationary flat cards, railway heads that we used to see, are now museum pieces and the stories that an old-timer could tell of the varied antics of these machines would be thought exaggerations by the younger generation. Some of the mistakes made by overseers and superintendents were really funny and today could hardly be believed. Still these plants made dividends and some paid for themselves several times before they were worn out and perhaps have that on the

INSTITUTE FOR RESEARCH IN SOCIAL SCIENCE

modern plant that we cannot show quite the net earnings per spindle that used to come regularly.

In closing, may I add that I do not think that I have missed reading an issue of your paper since its first and also that I shall expect to see it on my desk every Friday as long as we both are able to transact business. With best wishes for your future success, I remain — *Ralph Webber, General Manager, Union Mills Co., Monroe Mills Co.*

My observations on the changes of machinery and methods dates from 1898 and in that time we have seen many important improvements and interesting developments.

When I began work as a hopper feeder in a 5,000-spindle mill at Cedartown, Ga., I received $2.10 for a week of 66 hours. This was a daily wage of 35 cents and was approximately the wages paid at that time for common labor. Schedule was 6 a. m. to 6 p. m. with 30 minutes for dinner. The week ended (maybe) at 3 p. m. Saturday. The wage rate for roving haulers, oilers and banders, and work of this character ranged from 35 to 50 cents per day, roving frame tenders $6 per week and overseers ranged from $9 to $10 in the small mills, $15 to $20 in those of larger size.

Our labor was all fresh from the farm and a mill spinning 22's was considered to be a fine yarn mill. Mill operatives expected little and were as happy as they are today under very different living and working conditions. Blue denim overalls and brogan shoes (75 cents a pair at retail) were uniform on work days and quite often "on a Sunday." The only difference on Sunday was clean overalls. In spite of wages which on today's standards seem to have been terrifically low, these work people saw more cash in a month than they had been accustomed to in a year, and as far as long hours, 66 and 72, never bothered anybody. Schools and churches were not considered by mill management as of the same importance as today. Villages usually had churches and some school facilities but they were as a rule rather crude.

My start in the mill preceded by several years any effort to eliminate child labor and I must admit children of very tender ages working not only days but on night shifts of 60 hours. I recall at one time handling a ring spinning section at night for several months with spinners (girls, of course) ten years and up in age. Our spinning in the early days did not run so well as is required today and these youngsters had to fight all night to keep ends up. Today we find our spinning section men patrolling the frame alleys inspecting details but in the early days they were so busy bossing child workers they had time for little else. The chief accomplishment of a section man in 1900 was to produce a loud shrill whistle between two fingers of his left hand while he frantically waved his right hand in signal to a spinner or doffer. What a contrast with a smooth running spinning room today!

Present-day standards in spinning are far above those of 1900. Even when we are using the same frames operations are very different. Our spindles have been replaced with heavier and longer blades, adequate humidification automatically controlled, much better roving preparation and even weights. My early training did not include "ends down per thousands." Ye gods, we were all so busy putting up ends no one had time to count them.

Mechanical transmission was universal in 1900 with an engine, ceilings full of shafting and thousands of feet of leather belting to be always slipping and consuming power. If one frame was required to be in operation the whole mill had to go. If we were out of balance we were just out of luck.

Looms were built in a foundry, no machined parts and if I recall correctly, automatic looms were just starting their long years of development. My first five years experience as a mill superintendent was in a hosiery yarn mill and I do not recall much about looms prior to 1907.

The village and people present a very different picture today, the results of schools, churches and prohibition. Whether or not we favor the 18th Amendment and Volstead Law we must admit their effect in our villages for the betterment of both employer and employee. If my memory serves me correctly thirty years ago practically every mill employee, young and old, used chewing tobacco or snuff. Today we see some chewing by men but the use of snuff by women is the exception and not the rule. The elimination of snuff in the plant contributed more than any other one cause to our present-day cleanliness. Along with this has developed a personal pride on the part of our people which to our younger operators may seem to be lacking but to the older men is sincerely appreciated. Silk stockings and snuff do not appropriately go together.—*Geo. Harris, Atlanta, Ga.*

While I am not an old man, I do remember when I was employed in a mill where they worked twelve hours per day for five days and until four o'clock Saturday afternoon.

We had Foster & Peivy cards; stationary top flats with about twelve or fifteen cards delivering to a railway head with evener motion; leather top with the old complicated differential; the old Bridesburg spinning frame with spindles that had bolsters and steps separate; Easton & Burnham spoolers; slow speed warpers; single cylinder slashers; and plain hand-threading looms with no stop motion, positive let-off and indifferent take-up. In this particular mill they had a hot air slasher which I still believe is a splendid method of sizing warps. The help made from $3.00 to $7.00 per week even on the long-hour-week basis. Humidifiers were not used; hand- knotters had never been heard of; but the spoolers did tie a weaver's knot.

Compare this as of today with single process picking; revolving flat cards with vacuum cleaning; metallic drawing rolls; chain drive on roving frame; tape driven spinning with improved high speed spindles; metallic thread boards; cone winders in place of spooling; high speed warping; mechanical drawing-in machine; automatic looms with all the modern attachments make a very interesting comparison.

A great deal of help has been eliminated with a corresponding reduction in cost even with wages today averaging around $15.77 to $17.00 per week for fifty-five hours.

The modern mill village is like a palace as compared to the old condition of living, with the community work, schools, Y. M. C. A., libraries, etc.

My opinion is that the over-production with which we are confronted today has not been caused altogether by the increase in spindles, but is due more to the efficiency of the modern mill.

Much progress has been made in dyeing and finishing. I remember quite well when raw stock was dyed in open tubs with negroes to pole the cotton so as to get the stock properly saturated. Skein dyeing was about the only form of yarn dyeing known. Today we have circulating and revolving types of raw stock dyeing machines; long chain and package dyeing, which has brought about untold improvement in the running of the work through the mill after dyeing. Printing and piece dyeing has been developed to where it seriously affects the market for colored woven fabrics.

While there has been great improvement in cotton mill equipment and methods, at the same time there has been comparatively little improvement in some of the machinery and leaves much to be accomplished in the future. On the other hand, some of the old-time methods produced better quality than what is being turned out today. —*C. W. Causey, Treasurer, Pomona Mills, Greensboro, N. C.*

Having spent several years in the West during the time the manufacture of cotton in the South made its real start, I can easily recall the impressions made on my return to North Carolina.

The first was the general appearance of the average cotton mill village with its crowded rows of small unattractive houses. In most cases even a small vegetable or flower garden was out of the question. Sanitation in many instances was deplorable and the general living conditions were anything but appealing. The church was already building chapels in the villages but the schools had not appeared. The only place for the children were the town schools and it was a difficult task to get the "Factory Hill" to attend schools with the town children. The consolidated schools have finally solved the problem.

The modern mill village is often a delight to the eye. The huddle of shelters have in most instances given way to attractive cottages, many of which have electric lights and running water, giving more living comforts than many of the mill owners were enjoying twenty-five years ago. At that time the work hours were unreasonable. The workers had no time for home improvement or home enjoyment. The day force going on at 6:00 a. m. and coming off at 7:00 p. m. While the night force remained at work until 11:00 p. m. Saturday nights. Recreation was impossible and members of the family working on different shifts saw but little of each other except on Sundays. Since I have become actively interested in spinning of cotton, I have always avoided as much as possible all night work, feeling that the younger people especially needed their nights for rest and sleep. I sincerely trust that night work will soon be a thing of the past.

Another change that is very impressive is the splendid spirit of co-operation and friendly understanding that now exists between most mill owners and their employees. This is the natural result of the better homes, the flower gardens, and the canning clubs that have been in so many instances sponsored by the mill owners combining the aesthetic and the practical side of village life. The outlook in life for the mill operative has been advanced tremendously during my years observation. — *D. B. Coltrane, President and Treasurer, Norwood Mfg. Co., Norwood, N. C.*

There is such a contrast between conditions more than forty years ago when I started in the mill and today that I doubt if the average young man in the mill today would consider it a true comparison.

In those days, as you know, the mills ran seventy-two hours a week, starting at 6 o'clock in the morning and closing at 7 o'clock in the evening, with forty-five minutes for lunch. The card room in the old Clifton No. 1 mill, where I started, averaged running an extra quarter of a day three nights a week, making a total of eighty-one hours a week. The weekly earnings I received for running drawing was 35c a day, or $2.45 a week, including the extra time I have mentioned. Our drawing hands today do about two-thirds of the amount of work we had to do then and receive $13,65 a week for fifty-five hours. Card hands received 50c a day, or $3.00 a week, and there is no comparison between the amount of work they had to do on the old top flat cards used then and the modern revolving flat cards used today. Stripping cards in those days was something "terrific" as compared with today's method stripping. We had to take the top flats off and strip the cylinder with a hand card, pulling the cylinder backward with one hand while stripping with the other, and during this operation there was a continuous fog of dust boiling up in the operator's face. I wonder sometimes now, when thinking back over those days, how the men, or boys, could have gone through with what they did and still lived. As I remember, the average wage then was less than $3.60 a week.

The mills were lighted by kerosene lamps, and the drinking water was brought in in buckets, as compared with our modern installation.

With the above mentioned hours of running and weekly earnings, and with the mills using 5c and 6c cotton, we are not surprised that the mills in those days could have doubled their capacity out of their earnings every three or four years as a great many of them did.

Although there has been a wonderful improvement in the machinery within the last forty years, I believe there has been an even greater improvement in the skill of the operatives. Spinners then ran four sides, for which they received 30c a day, or $1.80 a week, and today we have spinners running eighteen sides and receiving $16.00 a week. Weavers averaged about four looms and received about $3.50 a week, while we have weavers today running from thirty-two to seventy-two looms, according to the construction, and receiving from $19.00 to $20.00 a week.

I am not sure but that the living conditions in the villages then were even worse than in the mill. There were no streets or sidewalks and most of the houses were just boxed up and not even ceiled. Water had to be drawn from wells and in some instances had to be carried for a distance of what we would call "two city blocks."

I might add that I was a subscriber and received a copy of the first Bulletin published and have been getting it continually since that time. I have always enjoyed it and want to congratulate you on having made it such a success, and especially do I wish to congratulate you on your Twentieth Anniversary and hope that we may be able to enjoy together the Fortieth Anniversary as well. —*W. P. Hamrick, General Superintendent, Pacific Mills, Hampton Div., Columbia, S. C.*

I am, or thought I was, until the latter part of '29-'30, a mill man and not a composer or writer but, my friend Dave Clark will punch us up once in a while to get us in the front line trench with him.

This time he evidently wants a breathing spell and wants us to expose our age in being for a little while reminiscent with him in his Anniversary Number of his Bulletin, so, I guess it behooves us to indulge him by forgetting the present "picklement" for the moment and turn back the hands of the clock with the pages of time for at least 25 years and think of the good "old days" when we had plenty of business to keep us hustling for 72 hours per week by light and 55 hours night.

Even the long hours and hard work failed to blot from my memory the suggestive lines:

> "How dear to my heart,
> Are the scenes of my childhood," etc.—

When I recall how at the age of 12 I was the most important personage in the mill, for I being the sole

(*Continued on Page* 19)

Increase in Southern Mill Equipment in 1930

The increase in equipment operated by Southern textile mills during 1930 was considerably less than in any recent year. In fact the figures in the number of additional spindles installed were approximately 66 per cent less than the average for the past ten years.

The mills, during 1930 installed 150,688 additional spindles, 3,078 looms and 2,502 knitting machines. This same figure for 1929 showed 419,790 additional spindles, 9,251 looms and 6,441 knitting machines.

For the preceding 10 years, the average spindle increase was 457,048 yearly.

The figures given above and those in the tabulations below, do not include equipment purchased for replacement purposes. They were compiled from data in Clark's Directory of Southern Textile Mills.

It is interesting to note that our records do not show that a new cotton mill was built in the South during 1930. This is the first year, since the textile industry was established in the South, in which no new cotton mills were built.

The end of the year also failed to show that any new spindles were on order to be installed in 1931, except for replacement purposes.

Our records show that the only new weave mill built in the South in 1930 was a silk mill.

TEN NEW KNITTING MILLS

The knitting industry continued to show the real activity in building new mills and in enlarging old ones, although the number of additional machines installed last year was considerably under the figure for any recent year.

Ten new knitting mills were built in 1930. There was a considerable increase in the number of full fashioned machines operated in the South.

Clark's Annual Spindle Increase List

The following list gives the name and location of each mill that increased the number of its spindles in 1930, together with the total by States and the total for the South.

Alabama

	Spindles
Kilby Cotton Mills, Montgomery	960
Pepperell Mfg. Co., Opelika	3,036
Avondale Mills, Sylacauga	6,720
Total	10.716

Georgia

	Spindles
Enterprise Mfg. Co., Augusta	3,688
Piedmont Cotton Mills, Egan	752
Chicopee Mfg. Co., Gainesville	12,240
Mary Leila Cotton Mills, Greensboro	428
Habersham Mills, Habersham	6,552
Unity Spinning Mills, LaGrange	4,680
Pepperell Mfg. Co., Lindale	10,824
Roswell Mills, Roswell	3,520
Tallapoosa Mills, Tallapoosa	1,000
Martha Mills, Thomaston	48,000
Lullwater Mfg. Co., Thomson	1,800
Total	93,484

North Carolina

	Spindles
J. M. Odell Mfg. Co., Burlington	2,370
Carlton Yarn Mills, Cherryville	6,000
China Grove Cotton Mills, China Grove	4,970
Dixon Mills, Inc., Gastonia	1,024
Glen Raven Cotton Mills, Glen Raven	1,832
Oakdale Cotton Mills, Jamestown	504
Park Yarn Mills, Kings Mountain	1,632
Erlanger Cotton Mills, Lexington	5,000
Oakboro Cotton Mills, Oakboro	1,008
Hannah Picket Mills No. 2, Rockingham	1,000
Mobile Cotton Mills, Selma	1,560
Hadley Peoples Mfg. Co., Siler City	1,372
Lola Mfg. Co., Stanley Creek	1,080
Beacon Mfg. Co., Swannanoa	1,332
Total	30,684

South Carolina

Appleton Co., Anderson	1,868
Victor-Monaghan Co., Arlington	3,808
Chesnee Mills, Chesnee	1,000
Ninety-Six Cotton Mills, Ninety-Six	1,788
Arcade Cotton Mills, Rock Hill	1,728
Ware Shoals Mfg. Co., Ware Shoals	864
Total	11,056

Tennessee

Trenton Mills, Trenton	2,500
Total	2,500

Texas

El Paso Cotton Mills, El Paso	248
Texas Gauze Mills, New Braunfels	2,000
Total	2,248

Spindle Increase By States

Alabama	10,716
Georgia	93,484
North Carolina	30,684
South Carolina	11,056
Tennessee	2,500
Texas	2,248
Total	150,688

Clark's Annual Loom Increase List

The following list gives the name and location of each mill that installed additional looms in 1930, together with the total by States and the total for the South.

Alabama

	Looms
Avondale Mills, Alexander City	47
Avondale Mills, Birmingham	84
*Brewton Silk Mills Corp., Brewton	100
Total	231

Georgia

Goodyear Clearwater Mills, Atco	4
Goodyear Clearwater Mills, Cedartown	6
Chicopee Mfg. Co., Gainesville	314
Mary Leila Cotton Mills, Greensboro	68
Highland Mills, Griffin	150
Goodyear Clearwater Mills, Rockmart	8
Southern Brighton Mills, Shannon	52
Total	602

North Carolina

Balfour Mills, Balfour	32
Alamance Weaving Mill, Burlington	100
Burlington Mills, Inc., Burlington	88

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*Indicates new mill.

(*Continued on Page* 68)

"Mac" Pays Tribute to "Dave"

An editorial note by the Associate Editor: I asked W. M. McLaurine, secretary of the American Cotton Manufacturers Association to contribute an article to our 20th Anniversary Number. In addition to that contribution, which appears elsewhere in this number, "Mr. Mac" asked that he be allowed space to pay tribute to David Clark, who founded the Southern Textile Bulletin 20 years ago. Mr. "Mac" said he wanted this opportunity to hand Dave Clark his flowers while he was still in the land of the living. Here they are:

Dave was born in Raleigh, N. C., May 15, 1877. He secured his B.E., M.E., and C.E. degrees from N. C. State College in 1895, 1896 and 1897, respectively, and an M.E. degree from Cornell in 1898. Dave was commissioned a captain in the Spanish-American War. From 1898 to 1908 he was engaged in cotton manufacturing, leaving this industry to enter the field of textile journalism. The Southern Textile Bulletin, of which he is editor and publisher, was founded by him in 1911. Dave is a member of Myers Park Methodist Church, Charlotte Country Club, Southern Manufacturers Club, the Charlotte Chamber of Commerce and is a Mason. He is a past president of the Charlotte Rotary Club and former vice-chairman of the Extension Committee, Rotary International, and a past director of Rotary International. Dave was married April 8, 1916. His hobby is beating Frank Jones and Perrin Quarles at golf.

"Always in war, never at peace and always in the heart of his fellowman" may be true expressions in regard to Dave Clark, Editor, owner and publisher of The Southern Textile Bulletin, celebrating in this issue the twentieth anniversary of his career as a journalist.

Dave is such a dominant character that The Southern Textile Bulletin is known largely as "Dave Clark's Paper." His editorial expressions, his bold and fearless English, backed by facts, have made him a personality in the textile industry of the South—and he is not entirely unknown in the nation.

The expression, "always in war," is not as martial as it may seem, nor is it as peaceful as it may seem, because Dave never occupies a neutral zone. He is always for or against something. He studies a policy or question carefully and then takes his position. One has only to ask him what he thinks and then wait for the answer. The answer represents his opinion and there is no use to hunt up any one to see if he means what he says—he surely does, and then some.

There are many constructive policies that Dave has assisted the industry in promulgating. His trenchant style has the punch of virility and the power of facts. His bulldog tenacity makes him a persistent advocate for what he considers right.

There are many destructive policies that have been aimed at the industry that in a large measure have been dulled and in some cases doomed by his satirical strategic editorials. It is hardly necessary to enumerate any of the measures, because Dave is nationally known because of some of these fights.

In talking to him one day about his methods, I suggested that he get a dictionary and look up the word "tact" and see if he could find out what it meant. I then suggested that he should get a book on the subject and see if he could not incorporate a little of its teaching in his policies.

He came back with the statement that only two words worried him and these he studied a great deal. These words are "right" and "wrong."

"Every policy comes naturally under one of these divisions. If the policy is right, fight for it strenuously. If the policy is wrong fight against it more strenuously."

A man of this type is often not seemingly so popular as some of the more diplomatic dispositions, yet he develops friends of the same candid type and on these he can depend just as they can depend upon him, while with diplomatic groups frequently there arises a question as to how dependable they are, or in what position will they stand.

Dave is exceedingly human and being thus he cannot always be right in his thinking, but he is nearly always right. "To err is human" and Dave is not different from other men in this respect. But Dave does not premeditatedly and wilfully err. It is a case of misinterpretation of facts, or conditions. His honor has never been questioned.

Dave is a great Rotarian and perhaps has done more for Charlotte Rotary than any other man. He has been signally honored by Rotary, both National and International. His drive and determination make him a natural leader in many fields.

Dave has a great civic mind. He is interested in politics, church, club life, as is evidenced by his outstanding activities in these fields. He has always been interested in the various associations of the industry. He is a regular attendant at all of the meetings of the State associations. He follows their policies and their discussions carefully, and frequently his advice is asked relative to certain measures.

He is a friend and well wisher of the American Cotton Manufacturers Association and his editorial policies have been very helpful in carrying out the policies of the board of government. He keeps in close contact with its activities and contributes much of himself and his magazine to the growth and development of the Southern textile industry.

He was one of the founders of the Southern Textile Association,—a group of the operating executives of the mills,—and has done much in assisting the activities of this very beneficial, co-operative and educational organization. The group sections find Dave present, detecting the trends in manufacturing and ready to contribute his observations in textile happenings.

Inasmuch as Dave is a graduate engineer, he has a mind capable of keeping pace with engineering trends.

The Arkwrights, a recent organization, had its inception in his fertile mind and in conference with some executive, manufacturing leaders, the plan was put into execution. The potentialities of this organization are limited only by its financial weakness. Dave is working on this and some day he will discover a financial plan.

The Cotton-Textile Institute, Inc., our national exponent of policies and principles, was assisted much in its formation by Dave in his generous space for news articles and editorials. Today he is carrying on in this field and each week thousands of readers throughout the South and nation are anxiously looking for his publication for the news of current events.

These statements are made not to indicate a dominating influence but to show an interest and co-operating factor that is one of his characteristics.

On this his twentieth birthday as a publisher, we extend our thanks and appreciation to him and hope for him many more successful years.

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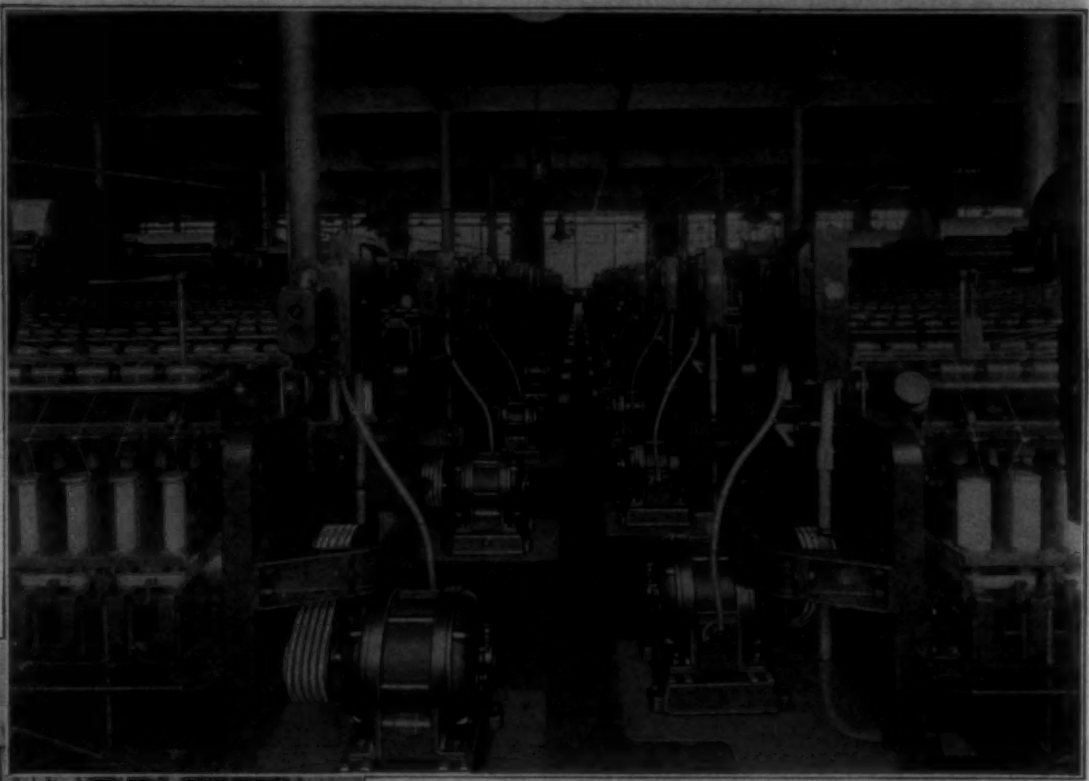
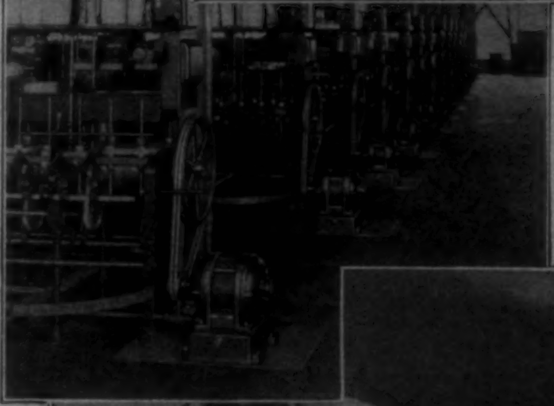
Allis-Chalmers Motors and Texrope Drives in a Southern Textile Mill





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The exclusive combination of Allis-Chalmers motors and texrope drives is unequalled for smooth continuous operation of textile equipment.

ALLIS-CHALMERS

Allis-Chalmers Manufacturing Company, Milwaukee

Then and Now

(*Continued from Page* 16)

manufacturer of the bands at 10c per day of 12 hours and official lamp cleaner also, I felt that little could be done toward the operation of the mill without my official presence.

Then to be promoted to card strippers assistant, helping strip 72 stationary top flat cards by hand, well, very few overseer hats would have fitted me at that time, although I must confess I was quiet frequently taken off my self assumed throne of importance by the blunt toe of a shoe propelled by an ambitious overseer who had as his goal the superintendent's chair, same as I had my eye and ambition on his job in a no distant date. Well I remember though that we held no malice then as it was all taken as part of the job and game, even as I felt in my freshman year, that it would all come around to me in the sophmore year of reciprocation in my climb up the ladder of experience.

I have often wondered what has become of the ambition that boys use to have, in seeking and working for the fellows job just ahead of him in authority. The majority seem to want the better paying jobs but, exert no effort to obtain them, thinking they will come on a silver tray or like a chill. I often wonder too, when I hear an operative complain of their work in todays modern mill, what he would do and say if he was given 24 deliveries drawing frames to attend without stop motions on the back, without coilers to pack the sliver in the cans, but were given a round board to keep the sliver packed down, and docked for singlings by not exercising his eagle eye to catch ends that ran out or broke at the back.

In going through a weave mill not long ago, it recalled one of my family's gypsy moves to another mill where we could make more money even after taking out transportation on "Satidy." I was assigned to job as filling boy to 4 weavers who ran 4 to 6 looms each. It being my duty to keep the shuttles threaded, and well do I remember what a time I had learning and becoming acclimated to the art of sucking the thread through the eye without taking a few yards of the filling well down into my anatomy.

I was soon to discover that we had moved into a State that had taken a step forward in child labor protection, so much so, that one day I suddenly found that one other boy and myself out of possibly 6 or 8 were conspicious by their absence, we being called upon to perform their duties the best we could until their return. Upon my inquiry as to their mysterious and quick departure, I was told that a "spector" had slipped in the mill, but not too quick for the keen eye of the overseer who had garnered all those boys, slipped them to the card room and inverted large railway head cans over them. As soon as the inspection was over everything returned to its serene tranquility and the relating of the experiences while being housed in their round hot dungeon. This was my first disappointment about my age, as I too wanted to be one of the herd and share in the excitement of the chase to cover upon the unexpected visit of any one dolled up. However we were not inspected to death in those days.

In the present day when operatives are working in well ventilated mills, with humidifiers to help the running qualities of their work, clean floors, humane overseers, good houses with modern conveniences, good schools, playgrounds for their children, short hours compared with even 15 years ago, can we men of yesterday help but marvel at the strides the textile industry has taken since we were boys. In this day of peak production, even though we wonder when will we get out of the wilderness of unprofitable business, that will allow us to once again sweep into our former strides with newer fields to explore and conquer, newer methods to discover, we feel that if we but compare our work today with that of yesterday, happy ought we to be that we have progressed this far on our highway of life and see the things we have accomplished left standing as mile posts, problems that we have overcome by perservance and work in the textile field.

I for one wish to thank Mr. Clark for calling my attention to our "times in the past" for it has helped me and I hope others to pause long enough to see and realize how much better the game is today for the young man than it was for us when we were boys.—*C. M. Black, Superintendent, Borden Mfg. Co., Goldsboro, N. C.*

I began cotton manufacturing in 1900—at that time only a few mills in the South were making goods as fine as print cloths.

The bulk of the cloth being made was sheetings which were largely exported.

The first dobby looms for fancy shirtings were installed about that time. The Laurens Cotton Mills were among the first to do so. Most of the employees were fresh from the farms near the mills or from the mountains of North Carolina and Tennessee.

At that time it was thought that any good superintendent must come from the North, but today there are none better than these reared and trained in this section —besides the employees in my opinion are the equals of any to be found in any section.

Wages were low; children 10 years and above were employed, and hours were long.

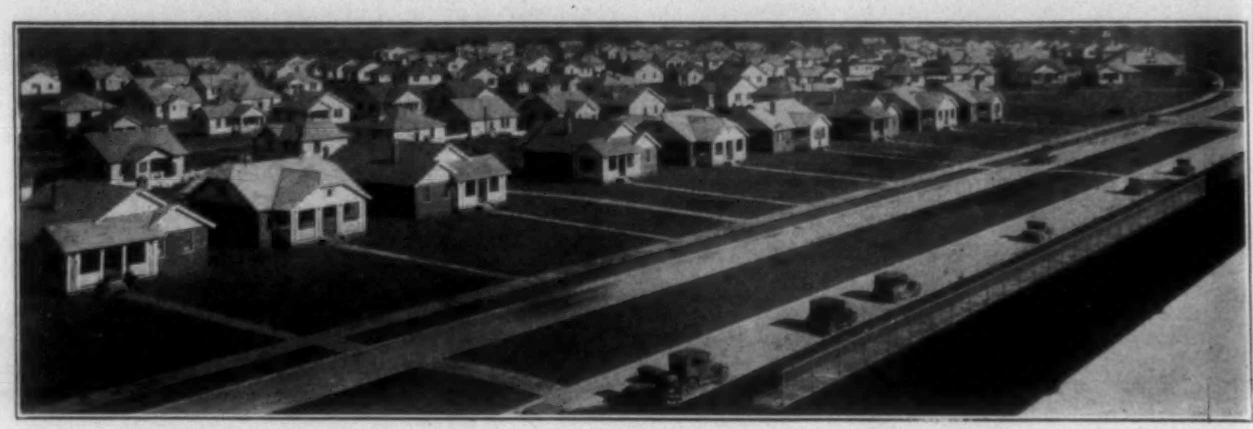
Wages have advanced to several times as much and hours cut to 10 hours per day and 55 hours per week.

Very few young people under 16 years employed and none under 14.—*Alexander Long, President, Arcade Cotton Mills, Rock Hill, S. C.*

My first experience was forty-four years ago as a treasurer of a cotton mill in Richmond, Va. This was then an old mill both as to buildings and most of the machinery. The equipment for instance consisted of old English roller cards and Foss & Pevy lifting flat cards. These were in batteries of about six with railway heads, one process of drawing, slubbers and speeders. A good part of the equipment also was old English looms. Not only were the buildings and machinery old but it was in such separate buildings as to involve what would now be prohibitive carrying of material back and forth. The plant was not equipped with any fire protection and the insurance rate therefore was high. Under my management fire protection was installed which even today would be considerad entirely adequate. This not only reduced the insurance rate to a livable point but I had such unlimited confidence in its efficacy that I made the fatal mistake of carrying far too little insurance. Weather in Richmond, such as never has been known I believe either before or since, in January 1893 completely froze this equipment and as luck would have it a fire started while it was so frozen and the company ws thereby put out of business.

From there I moved to Reidsville, N. C., thirty-six years ago and rebuilt and added to and changed over completely the equipment of a little yarn mill into what is now there in a print cloth mill. This plant operated

(*Continued on Page* 54)



An interesting view of the newly completed village of Goodyear Tire & Rubber Co.'s plant at Rockmart, Ga. Houses, paving and yard grading completed. Seeding and planting done later. Robert & Co., Atlanta, Ga., architects and engineers of mill and houses.

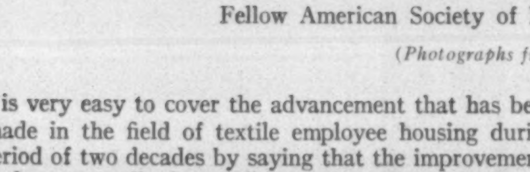
Twenty Years of Southern Textile Village Improvement

BY E. S. DRAPER

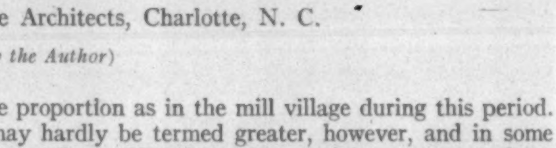
Fellow American Society of Landscape Architects, Charlotte, N. C.

(Photographs furnished by the Author)

IT is very easy to cover the advancement that has been made in the field of textile employee housing during a period of two decades by saying that the improvements that have actually been effected throughout the South during that period have been extremely far-reaching. The acid test of result, however, is to compare such improvements or progress with what has happened in other fields of housing. If we examine the typical farming communities of the Piedmont and mountain South, it is certainly evident, even with casual observation, that no such progress has been made. If we consider that the majority of people who have entered the mill villages during this period have come from Piedmont or mountain farms and farm communities, it is pretty certain that progress and living standards have been greater in the mill village under the initiative of the mill owners than if they had stayed on the farms. The comparison with city suburban development for similarly situated groups of people would not show as much difference; in that housing standards in cities have improved in about the same proportion as in the mill village during this period. It may hardly be termed greater, however, and in some instances less. New inventions and improvements have been reflected in the lives of the people of the mill villages quite as readily as in other cities and communities. Textile employees own automobiles in very nearly the same ratio as the 1 to 5 ratio of the American people as a whole; radios are replacing organs in the village homes; the movies are quite as well patronized by textile employees as as by the city people, and practically no textile village is without its moving picture house, unless it is situated within a city where movies and other forms of recreation are publicly available. Better school facilities, both in equipment and methods of teaching, have found their way into the mill schools to an even greater extent than in country towns or rural communities of similar size. In fact, in some instances textile school districts have a higher rating than those of neighboring cities. In short, go through the whole range of modern inventions and improved standards of living, and it is



Parkway with Overseers' Houses Facing Park at Pacolet, S. C.



Goodyear Park at Atco (Ga.) Mill of Goodyear Tire & Rubber Co.

Street scene in village of Sayles-Biltmore Bleacheries, Biltmore, N. C., soon after construction was completed and grass seeded. This village was built on unusually rough topography, but very attractive surroundings. J. E. Sirrine & Co., Greenville, S. C., architects of houses.

found that these have penetrated the mill communities in greater proportion than in the rural sections, and at least equal with the cities.

The real impetus to mill village improvement came after the World War, when the mills experienced several years of profitable manufacturing. Then it was that old villages were improved, night villages, and new mill villages were built more attractively; better schools and handsomer churches were built in the village; community houses, Y. M. C. A. buildings were constructed; other factors pertaining to the recreation and amusement of the people were adopted as necessary in their daily lives. Water-carried sewage and water systems were built in many villages. In several Southern States legislation demanded improved sanitary systems. Concrete sidewalks, curb and gutter, and surfaced streets became a normal part of the better mill community. Houses were improved to the extent of adopting bungalows with halls and bathrooms equal to the city bungalows being built. Yards were improved, alleys eliminated, with pole lines for house service installed along rear lot lines to allow for street planting and beautification. Of course, there were some communities that lagged and still lag behind, but under the stimulus of securing competent help during this period of extreme mill activity, the textile manufacfacturers made every effort to improve and modernize living conditions to hold the best class of people.

It is significant that wherever any such general advancement in living standards had been accomplished, even though the conditions which made this advance possible in the way of financial profit might not continue, that rarely do these standards revert or become lower, because the people become used to them and demand them as a part of their daily lives. This has been true in the mill villages. The standards of living have been definitely raised and will be kept.

During this period much more attention has been given to basic planning of the mill village. With the introduction of improved utilities, the old method in effect a generation ago of picking a ridge here and there within the area and building houses along the ridge, regardless of land wasted, has been found uneconomical. Necessity for proper location and tying in of sewer and water lines, street improvements, etc., has made the compact, well designed village the most economical type of development. Planning for intensive use of the land, still keeping lots of sufficient size, has resulted in a much better appearing village, wherein each area, if it was not used for building purposes, was set aside and gradually improved for a definite use.

To name a list of all the mills which have developed new or improved villages during the past twenty years would almost require a roll call of the entire industry, so great are the changes that have been accomplished. During the past couple of years, when new mill construction has steadied down, there have not been as many extensions, but considerable attention has been paid to the beautification and improvement of existing villages. Yards have been grassed and beautified, parks and playgrounds have been developed and improved. Careful village planning of ten years ago has shown effects that are increasingly evident as time goes by. The more attractive villages have secured a better class of workers and a gradual improvement accomplished by beautification has accompanied the advance in living standards of this period.

View of Neighborhood Park in Pacolet Mill Village, Pacolet, S. C.

View of Lanett Park, Lanett Division, West Point Mfg. Co., Lanett, Ala.

Birthday~Greetings

Among the messages of congratulations that have come to us on the occasion of the 20th Birthday of the *Southern Textile Bulletin,* are the following letters which are received with real appreciation.—Editor.

Here's my heartiest congratnlation to you, on the success you have had in publishing the Textile Bulletin for the past twenty year. We are reminded "The heights of great men reached and kept was not attained by sudden flight."

Having been a close observer of the growth of the textile industry for many years, and of the influence you have had on it, I am sure your strength has been manifest in defending the rights of the industry not only in your editorial columns, but also in Congress and before the United States Supreme Court, you have had the courage to stand alone when necessary for your convictions, I am frank to say that from my unbiased viewpoint you have had a greater influence for good over the textile industry in the South than any other man of my acquaintance. "Long may you live to carry on." I am—*Geo. F. Brietz, Superintendent, Selma Cotton Mills, Selma, N. C.*

It has not yet been my pleasure to meet Mr. Clark personally, but I wish to say right here, I do not consider you a stranger to me and certainly your good paper, the Southern Textile Bulletin is no stranger. I remember when it use to come to my father fifteen or sixteen years ago and for the past few years I have been a regular reader of the Buleltin each week. I get real pleasure and satisfaction from reading the good sound articles found within its covers. I would like to take this opportunity to express my personal appreciation for the good constructive and interesting paper you are so faithfully furnishing the textile industry, especially the good and worthwhile editorials. Your fair and impartial stand at all times for the good of the industry as a whole, both from the manufacturers point of view and the operatives alike, is worth far more to us all, than we might think at the time we are reading them.

Your bold fight on the right side, namely, against, communism and the detestible parasites who would come into our happy and peaceful Southern mill villages, with the hope of living fat on money from our weekly pay and giving nothing in return, but want, poverty and distress meets with my personal and hearty approval. I am with you against these.

Mr. Clark I consider you, through the Bulletin, one of the best friends the Southern textile operatives and the industry as a whole have today and here's wishing for you along with the Bulletin many happy birthday anniversaries, with each year looking brighter as they come on.—*W. C. McAbee, Jr., Overseer Towel Finishing, Lowell Bleachery South, Griffin, Ga.*

May we extend our sincere congratulations to you on 20 years of successful and splendid work in the interests of the textile industry. If the writer remembers correctly, your David Clark called on us prior to your first issue and we believe we were one of your first advertisers. We also believe that it is a fact that we have been one of your most continuous advertisers ever since, even if in a small way.—*Geo. G. Brown, Treasurer, The David Brown Co., Lawrence, Mass.*

I wish to take this opportunity of extending my best wishes to you in the celebration of your Anniversary on March 5th and to express the hope that the Southern Textile Bulletin may continue to serve the Southern industry for many more years.—*Frank S. Dennis, Macon, Ga.*

Twenty years ago, the writer was with Fulton Bag & Cotton Mills, Atlanta, Ga., and I guess was a charter member on the first list of subscribers to the Southern Textile Bulletin.

Reading this journal I have always found it interesting. Your stand has always been in the interest of the Southern cotton industry, and the large family of people who make up this great business.

I wish for the Southern Textile Bulletin and its Editor, twenty more years of the "things which go to make both prosperous, happy and successful.—*John L. Robinson, Burlington, N. C.*

May I congratulate you on the Twentieth Anniversary of the Southern Textile Bulletin, and the wonderful service that you have rendered to the textile industry whereever your paper is found. I have been a subscriber to the Bulletin from almost the time that it has been published, and have received great help from it's pages.

I also appreciate, and I'm sure that I voice the sentiment of the public, the stand you took in recent uprisings among some of the textile plants of the South. Many, many congratulations.—*Dover Mill Company, Overseer Carding and Spinning.*

I am glad to note that another mile stone will have been reached on March 5th, 1931, at which time you expect to publish a Twentieth Anniversary Number of the Southern Textile Bulletin.

As a constant reader since the first issue of the Bulletin, I congratulate you for the fearless and most excellent manner in which you have so ably represented the textile industry of the South.

Mill executives and operatives alike, are under lasting obligations to you, because of your efforts in presenting facts on all subjects pertaining to industrial matters, thereby rendering a service not fully covered by other publications. With every good wish for your future success, I beg to remain,—*W. M. Sherard, Hendersonville, N. C.*

Permit me to congratulate you upon the 20th milestone of your publication of the Southern Textile Bulletin.

I well remember meeting in 1910 for the first time in Columbia, S. C., at a meeting of the Southern Textile Association and from that day to this you have had my respect and the full friendship that such acquaintanceship brings.

I have watched the growth of your paper from the start and you certainly deserve all the prosperity that may have come your way because to start and develop a textile journal to the point where you have brought your publication has been no bed of roses I am quite sure.

However, your success it seems to me has been based

(*Continued on Page* 58)

DU PONT ANNOUNCES

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LIGHT fastness coupled with excellent solubility and level dyeing properties particularly adapt this bright direct orange for use in the dyeing of upholstery, drapery and similar materials. In shade it is between Pontamine Fast Orange EG and Pontamine Fast Orange ER, but it is superior in fastness to light to either of these dyestuffs.

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Pontamine Fast Orange EGL may be dyed on cotton raw-stock, yarn or piece goods. On account of its extremely good fastness it may be applied not only for self shades but in combination with other direct colors (of the same characteristics) for the production of browns, tans and grays. When union material is dyed from a neutral bath, the silk is practically unstained. Cellulose acetate silk effect threads are left white.

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The Quota Plan---Plenty of Pie

BY F. W. JEFFERSON

President, Iselin-Jefferson Co., New York

AT a recent meeting of the directors of the Association of Cotton Textile Merchants the newly elected president, Leavelle McCampbell, stated that the recent anomalous position of the cotton mills, improved statistical position and lower margins of profits, could be explained by a homely simile. He said that manufacturers and their agents had all been invited to eat a pumpkin pie but that the guests had forgotten their manners and had refused to await their slice and to use their forks, so that the pie was now on the floor with everybody grabbing for their part and merely succeeding in getting it into their hair, their eyes and their noses.

How much better, he said, if they had sat around the table and had permitted someone in whom they could place trust to divide up that pie in proportion to the size of the capacity of each to digest it.

He explained that if they would agree to proceed according to good manners and common sense that they would find plenty of pie.

In this case, the pie to be divided is the yearly demand for cloth. This is a determinable quantity. Statistics are available to show the country's capacity to absorb print cloths, sheetings, drills, denims, ginghams, chambrays and other staple constructions.

Statistics are also available as to potential productive capacity, and daytime productive capacity.

It is certain that, in an orderly market, there is demand for full daytime production which could be absorbed at fair market value which naturally contemplates profit for those whose money is invested in manufacturing.

It has been found that the shipments of print cloth for the past few years have averaged 1,400,000,000 yards annually, and it has been estimated that this is somewhat in excess of full daytime capacity. Therefore if mills would confine their production to daytime for a comparatively short period, it is certain that the present surplus would soon disappear with a resultant stabilization of prices.

If these statements are true, it would appear that the manufacturers have it within their power to turn losses into profits, but the fact remains that the night running mills take exception to shutting off a substantial part, in some cases fully 50 per cent of their productive capacity, while other mills run just as they have always been accustomed to operate.

It would appear that some means ought to be found to smooth out this inequality and no doubt this point could be satisfactorily cleared up if the quota plan for apportionment of production were adopted.

There are those who contend that the manufacturers that have spent money for night running equipment have been compensated through extra profits made when the trade could absorb the production.

Whether this is true or not is it really to the advantage of the night operators at present to run at cost or for inadequate returns while the day operators run at a loss, when profits might be made by both types of mills if night operation were abandoned?

Can it not be demonstrated after a short trial that any apparent sacrifice through decreased production would be paid for many times over by increased profits?

In holding out for a policy of absolute fairness as between themselves and certain competitors, are not some manufacturers losing sight of the larger goal, and would not the readjustment of spindle hours result in a benefit to the trade as a whole, and therefore prove beneficial to the mills making the most drastic curtailment?

It is quite possible that some large and successful manufacturers who have been vilified by the trade may have chosen their course of action because they could not sanction any plans heretofore offered. It is not possible that these same men would gladly welcome a plan which they could see might mean curtailment with profit?

There are men who refuse to be driven especially against their own best judgment but these men are frequently more than willing to co-operate when a constructive plan is presented. It is quite possible that some of the so-called non-conformists might take an active part in working out the quota plan if they could be persuaded of the soundness of the theory.

The quota plan means just what its name implies;—a proposition to budget production and apportion the yardage to be manufactured to the various mills in proportion to their capacity for producing. In any such apportionment there are many things to be considered but if the plan is adopted in principle a way can be found to make it workable.

If the print cloth group would lead the way and would authoritatively delegate to the various units the right to manufacture their respective portion of the whole, and no more, we should soon cure overproduction and restore the orderly market so much desired by seller and buyer alike.

There are five Worth Street commission houses distributing 70 per cent of all the print cloths; with five more added, the combined group would control 87 per cent. It is not difficult to sell to the heads of these houses the sound theory of budgeted production. The majority of these selling houses are willing and anxious to work out a plan for sales by quota, but there is more work to be done.

The mills represented by these selling houses must agree to accept their quotas if the plan is to be successful. Any mill would rather sell one million pounds at six cents per pound profit than two million at a cent or two margin, or possibly on merely a break even basis, therefore the problem is to convince the mills of the results to be obtained, and a comprehensive analysis of statistics should demonstrate these facts.

The procedure for setting a quota plan into operation is not particularly difficult. The first move would be the delegation of authority by the mills to their accredited selling agents to act for them in the fixing of quotas.

The second step would be the submission of data by each selling house to the Cotton-Textile Institute.

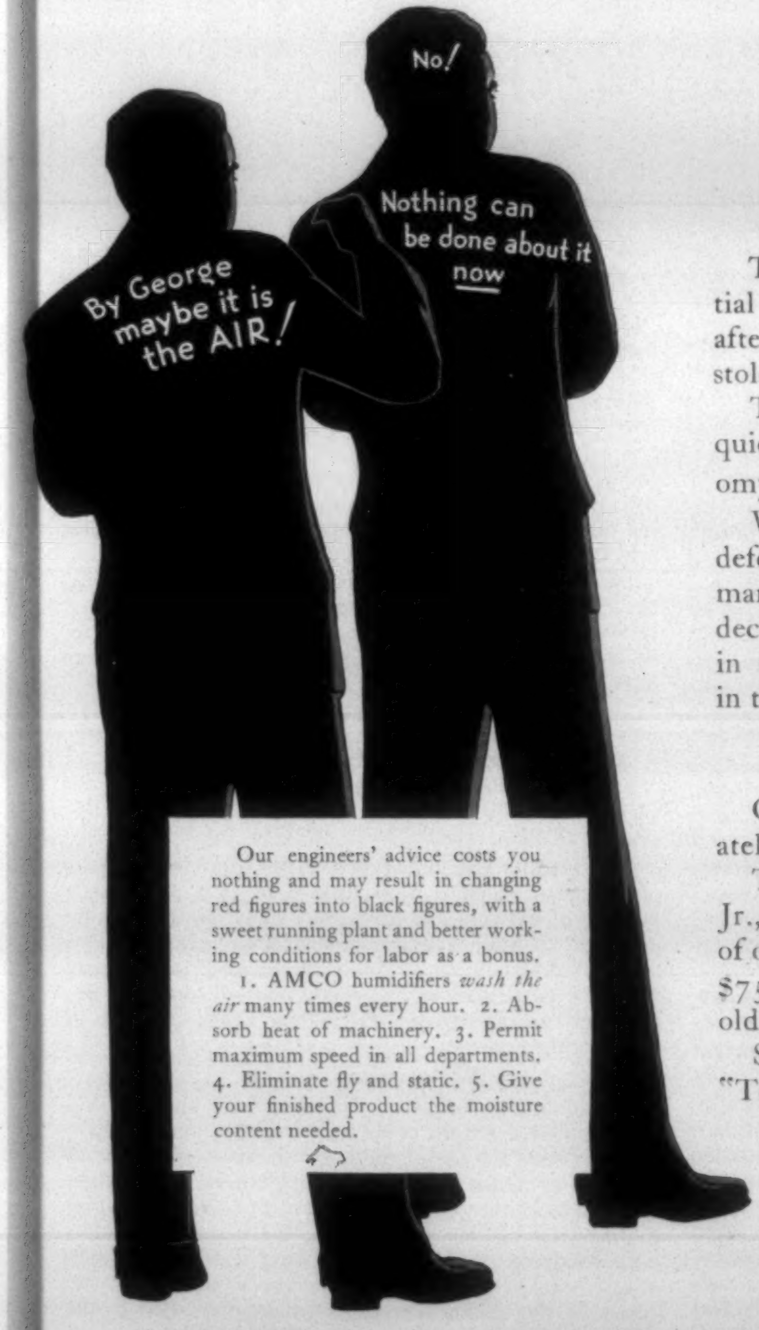
The authority selected and agreed upon to work out the quotas would be confronted with some difficulties but if there was a general agreement upon the soundness of the plan, these obstructions could be hurdled.

The often repeated argument that a mill having been

(*Continued on Page* 62)

"When a man stands in his own way, everything stands in his way."
—Thoreau

still further economies


No!
Nothing can be done about it now
By George maybe it is the AIR!

Our engineers' advice costs you nothing and may result in changing red figures into black figures, with a sweet running plant and better working conditions for labor as a bonus.

1. AMCO humidifiers *wash the air* many times every hour. 2. Absorb heat of machinery. 3. Permit maximum speed in all departments. 4. Eliminate fly and static. 5. Give your finished product the moisture content needed.

The quickest way to squeeze a substantial sum of money out of operations is to go after and capture the money now being stolen by imperfect humidity.

The cost of perfect humidification quickly comes back in two ways—economy in manufacture and a better product.

Very often a system only ten years old defeats the finest machinery and the finest management brains because in the past decade no greater progress has been made in any field of commercial activity than in that of humidification.

Why stand in your own way?

Get the facts—how 43 mills immediately cut costs and increased profits.

These mills were picked by J. W. Cox, Jr., textile specialist, as typical of hundreds of other mills which made from $5,000 to $75,000 a year by correcting the faults of old humidifying equipment.

Send today for this authentic report—"Tours through Textile Tangles." It is free.

This newly designed Amco Humidity Control automatically regulates and controls humidity in textile and other mills without using wet or dry bulb actuated devices. Thousands in field service attest its splendid and satisfactory performance.

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New Uses and New Opportunities For Cotton

BY GEORGE A. SLOAN

President, Cotton-Textile Institute, Inc.

IN a year that has been replete with developments of extraordinary significance to the cotton textile industry, it is distinctly encouraging to note during that period the marked increase of interest in extending the markets for a wide variety of cotton products in a number of important industrial fields, as well as in the realm of fashion. Of the many projects in which the Institute has been engaged none has had the appeal to the country at large, or has been more helpful in creating to the country and helpful interest of the general public in our industry's problems, than the work of our New Uses Section. At this time when prospects are favorable that the mills can proceed with fewer of the major difficulties that have been harassing the pursuit of sound merchandising policies over the past few years, it is opportune to call attention anew to the importance of this work for the future.

Happily there are at hand many influences with the help of which the cotton textile industry can take full advantage of a present favorable situation to extend its markets. Taking precedence there is first an interested public which is prompt to show on every occasion its growing appreciation of the qualities of cotton for a host of purposes. No more striking evidence of this fact is to be found than the increasing eagerness of various civic and social groups to sponsor organized efforts looking toward a larger consumption of cotton in some form. Of a number of such instances wherein the Institute is giving its co-operation, there may be mentioned as typical the splendid work of the Gastonia, N. C., Chamber of Commerce in conjunction with the local women's clubs, where a comprehensive program has been launched with a vigor exceeded only by the enthusiasm of the backers of the plan.

From another direction, comes the active co-operation of Federal and State governmental agencies in offering assistance along various specific lines in the development of new uses. For example, a corps of government scientists and economists are devoting practically their entire time to the development of the program of both technical and commercial research of the New Uses Committee made up of officials of both the U. S. Departments of Agriculture and Commerce and representatives of the Institute. Similarly our New Uses Section has been called upon to collaborate in the work of the Southern conference of State commissioners which met in Memphis earlier this year to co-ordinate the efforts of individual State agricultural commissions in developing present and potential uses for cotton.

COTTON CLOTH LETTERHEADS

As indicative of the unseen possibilities in many of the new uses referred to the Institute and to which our New Uses Section is giving continuing study may be cited the amazing developments of the utilization of the cotton cloths first suggested for letterheads and business stationery. Here was an idea that was first brought forward largely because of its novelty. The novelty and attention-value were important attributes undoubtedly in stimulating the demand for letterheads, that in a short six months consumed about 2,000,000 square yards of fabric, but during that time in which notable improvements in finish occurred, new and enduring advantages were discovered. Durability and attractive appearance suggest its suitability for a number of purposes, for which the New Uses Section of the Institute is now aggressively promoting. These include book jackets, menu cards, business calling cards and legal documents. Talking picture and radio broadcasting studios are finding it advantageous to use manuscripts of cotton on account of their noiseless and "crackle-proof" qualities before the microphone.

An interesting example of the possibilities in finding new uses for long familiar cotton fabrics is afforded in the results of recent experiments with various wall coverings for the exhibit galleries at the Art Center, New York. These service tests of the past year have demonstrated conclusively that for the purpose a tarlatan cloth, best known perhaps for its utility as a foundation fabric for various types of costumes, has unique advantages. These have been found to be—

1. Its pleasing neutral effect as a background for paintings and other art exhibits.
2. Its dust-repellant quality.
3. The invisibility of uncovered nail holes in the fabric occasioned by the frequent changes of pictures in position.

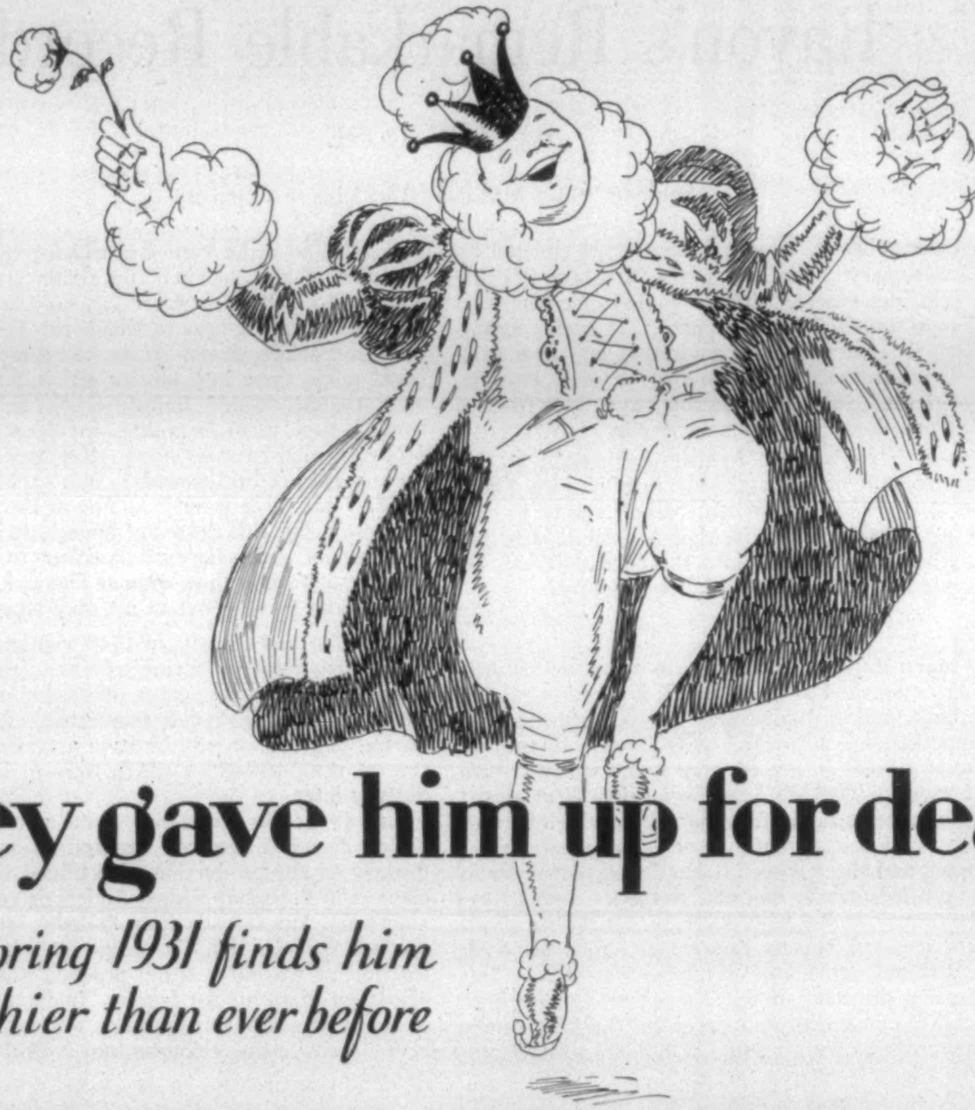
The Instiute is collaborating in the draft of a report of the tests which is to be presented to a nation-wide meeting of museum and art gallery directors in Philadelphia next month. The recommendation on this occasion of a glazed tarlatan as the most satisfactory wall covering for these particular service conditions will open up immediately an entirely new market for 1,000,000 yards of this fabric.

WATERPROOF FABRICS

In still another field, the proven strength and lightness of weight of a waterproofed heavy cotton sheeting have made possible the use of the latter in the construction of the hulls of motor boats and small cruisers. The fabric is inserted between two layers of wood planking obviating the need for calking and assuring the permanent watertight condition of the hull even after a winter's lay-up of the boat. In addition, the weight of the boat is reduced by the elimination of ribs commonly used in the hull without imparing the strength of the latter.

Another development of major scope and decided importance in the future broadening of our markets is the determination of the farmer, noted at this time, to contribute his full share in effecting an increased consumption of cotton. During the past year there have been recurring evidence of the increasing favor of cotton bags in the marketing of a wide variety of farm products, especially nuts, vegetables and even certain fruits. In connection with the Institute's promotion of this item,

(*Continued on Page* 52)



They gave him up for dead

but Spring 1931 finds him healthier than ever before

KING COTTON has been the miracle man of the business world. Given up for dead, he has come back stronger than ever before. Slowly but surely in the last few years, cottons have surged into new popularity.

And this Spring they attain new "highs" in fashion prominence. Never before have cottons been offered in such a variety of weaves and weights, with such finish and "feel", in such charming and colorful designs. Never before have cottons been sought more eagerly by well-dressed women!

The story of cotton's come-back has many interesting angles. But none is more interesting than the important part played by trademarking and identification.

Here are just a few of the important advantages secured by the manufacturer who trademarks his cottons:

1. *Absolute protection against substitution.*
2. *More effective advertising.*
3. *A name that builds up invaluable good will.*
4. *Steady, repeat-demand that is neither seasonal nor stationary.*

And then there is the obvious advantage of *naming* your fabric. The consumer will learn that name . . . use it when she comes back for more . . . when she buys made-up merchandise . . . when she "bridges" or "teas" with friends.

In the last few years Kaumagraph has helped many a manufacturer. In some cases we have actually created and designed the trademark. Often Kaumagraph has had the trademark registered. Always Kaumagraph has shown the manufacturer the ideal way to apply his trademark—with Kaumagraph Dry Transfers.

Kaumagraph Dry Transfers constitute the perfect method of applying trademarks to textiles with beauty, economy and absolute clarity. To facilitate the application of Kaumagraph Transfers we have designed special machinery that reduces marking costs to a negligible item. We will be glad to mail you additional information . . . or, if you prefer, we'll send a special representative to tell you more.

KAUMAGRAPH COMPANY
200 Varick St. New York City
Boston . . . Chicago . . . Philadelphia . . . Los Angeles
Chattanooga, Tenn. . . . Charlotte, N. C. . . . Paris, Ontario . . . Paris, France . . . Manchester, England

Rayon's Remarkable Record

BY H. W. ROSE

Southern Sales Manager, The Viscose Company

IT so happens that the twenty years period covered by this Anniversary Number of the Southern Textile Bulletin coincides exactly with the period of commercial production of rayon in this country. It seems appropriate then, that we pause for a moment and look back over these twenty years with perhaps a peep into the past beyond that time, and see how rayon has reached its present prominent position as a textile.

Perhaps such a glance is further appropriate at this time, since some of us have already been pausing under the influence of 1930, and we can steal a moment to gain a bit of perspective while drawing a deep breath and again lengthening our stride into the pace that has become accepted as normal in the rayon industry.

RAYON IN THIRD PLACE

Today rayon stands in third place as a textile fiber. It ranks after cotton and wool, though it is steadily gaining on them both, and it has several years since surpassed silk in importance. It would hardly be safe to venture that there is a home in the country today without some article of rayon. "Milady," as the fashion sheets insist on calling her, wears rayon from her ribboned winter hat, and "straw" and transparent summer garden hat, to her satin slippers and sheer hose. It has found usefulness in her home as bedspreads, damask, draperies, upholstery, rugs and carpets, shades, wall covering, towels—in short, there were counted in one department store not long ago 243 different articles of rayon merchandise. This ever increasing diversity of the comparatively new fibre accounts for the peak consumption of 140,000,000 pounds of the yarn in this country and 123,000,000 pounds production.

TWENTY YEARS AGO

And yet, twenty years ago, when the Southern Textile Bulletin first undertook the enlightment of the textile trade this country made its first rayon and managed to spin the proud total of 350,000 pounds. Ten years before that it was only a chemist's hope. In 1900 it was the dream of many chemists to make an artificial silk thread commercially successful, but it had been accomplished only in a small, though spectacular way by the French chemist Count De Chardonnet.

THE DAWN OF AN IDEA

Let us look back for a moment as far as the dawn of the idea of artificial silk. There was a French scientist, Rene de Reaumur, who was extremely active in the 18th century in mathematics, metallurgy, astronomy, meterology, and nearly every other branch of science, including natural history. His greatest work was a six volume entomological study entitled, "Memories pour servir a l'historie des insects," published in Amsterdam in 1734. This imaginative and indefatigable investigator in the midst of this classic work on insects pointed the way to making artificial silk. He wrote: "Silk is only a liquid gum which has to be dried; could we not make silk ourselves with gums and resins? This idea, which would apepar at first sight fanciful, is more promising when examined more closely. It has already been proved that it is possible to make varnishes which possess the essential qualities of silk. China and similar varnishes are unaffected by solvents; water has no affect on them; the greatest degree of heat to which our fabrics are exposed could not change them. If we had threads of varnish we could make them into fabrics which, by their brilliancy and strength, would imitate those of silk, and which would equal them in value, for good varnishes when properly dried have no smell. But how can we draw out these varnishes into threads? We cannot, perhaps hope to draw out these threads as fine as those obtained from silkworms, but this degree of fineness is unnecessary, and it does not seem impossible either to spin them into threads, or to spin them even as fine as natural silk, when we consider to what extent art may be carried."

Reaumur had already, in 1710 written a paper suggesting the possibility of using spiders to produce silk, considered at the time to be so important that the Chinese Emporer Kang-he had it translated. In the paragraph quoted above, however, he gave a remarkably clear picture of the possibilities which were to be followed up a century later.

In spite of this broad hint, it was over a hundred years before chemical research resulted in anything that led directly to the production of artificial silk. In 1855, a chemist in Lausanne named Andemais succeeded in spinning some fine threads from collodin, and he called the product artificial silk. It could not be used as such, but the process was later found practical for the production of carbon filaments for lamps. In fact, the cellulose research, and under this pressure, several discoveries were made in converting cellulose into a fluid and thence into a thread.

THE FATHER OF RAYON

A series of patents appear between 1855 and 1900 covering processes that contributed much to the making of artificial silk, but the first patent taken out under which artificial silk was spun and fabric subsequently woven was that of Count De Chardonnet in 1884. In his method he used nitro-cellulose, and in the Exposition at Paris in 1889, he exhibited fabrics woven from his thread. As this was the first appearance of an artificial silk fabric, to De Chardonnet goes the honor of being the father of the rayon industry. A modification of his method is used in this country today by the Tubize Company and accounts for 6 per cent of our total production.

In the same year as De Chardonnet's original patent, 1884, the English chemist Weston took out a patent on a different process which survived as one of the four in use today. In his research toward making carbon filaments he used a solution of copper and ammonia to break down the cellulose. He was successful in making lamp filaments by this method, but it waited for Despeiss to apply it to the making of artificial silk. Despeiss patented it for that purpose in 1890, but he left it in the experimental stage. In 1897 the same general process with modifications was patented by Fremery and Urban and the product was called "Pauley Silk." Still it did not pass the experimental stage, but in 1900 a modification by Bronnert was patented that led to the successful production of cuprammonium rayon and he is therefore generally conceded to be the inventor of this one of the four methods in use today. It is used in our country by the American Bemberg Corporation and accounts for something over 1 per cent of our production.

CELLULOSE ACETATE METHOD

The cellulose acetate method was developed during the same time. In fact it was the first method used for cellulose solution and occupied more research than any other method, but it was not until 1901 that it was brought into prominence by two English chemists, Gross and Bevan. Even then it was not applied commercially to making artificial silk. During the World War the British government made cellulose acetate dope for water proofing airplane fabrics and after the war these plants were converted to spin rayon by the same process, and the British Celanese was organized. The Celanese Corporation of America uses the same method as do units of th Viscose Company, DuPont Rayon Company, and Chatillon Corporation. The process accounts for 8 per cent of the production today in the United States.

Meanwhile these same English chemists, Cross and Bevan, had in 1892 patented another process known as thiocarbonate of cellulose. An inventor of electric lamps named Stearn became interested and with Cross, succeeded in making carbon lamp filaments by this process. It did not reach startling proportions through this business, as carbon filaments were soon replaced by other types, but the viscose process, as it was called, was destined to become by far the most important in the manufacture of artificial silk. An English silk weaving concern, Courtaulds Limited, recognized the possible future for an artificial silk and bought the rights to the Cross and Bevan patent.

Spinning had so far consisted in forcing the cellulose solution through a spinnent to form a single solid filament, or horsehair. Another Englishman, Tophan, gave this process tremendous impetus with an invention drawing the filaments into a box or pot on a spindle and winding the thread by centrifugal force against the sides of the pot. Improvements had advanced the process to such a point by 1906 that Courtauld built the first viscose plant. This was the first step in the actual production of viscose rayon, which today accounts for 85 per cent of the world's production.

FIRST AMERICAN PLANT

As uses for this new textile fibre were developed it came to the United States and found its way into braid, millinery, materials and such coarser decorative fabrics. The yarn was quite harsh at first, but when the filaments were made finer and the thread became softer, it began to appear in hosiery knit goods, silk, cotton and wool mixtures, upholstery, plush and underwear. Thus, by 1910, the need for a production plant in this country was evident. The Viscose Company's first plant was started that year at Marcus Hook, Pa., and the following year its first production was sold in the trade.

GROWTH IN PRODUCTION

Of the twenty years covering the period of rayon production in the United States, the Viscose Company stood alone for the first ten years. The history of the artificial silk industry shows a steady improvement of the yarn in wet and dry strength, in diversity of size offered and in increasing the number of filaments for each count. This led to the rapid adoption of the yarn for use in the various textile mills and the production had to be increased rapidly to keep pace with the demand. The following table gives a clear picture of the phenomenal speed with which the new fibre grew after the first 350,000 spun in 1911.

	Lbs. produced In U. S.	Lbs. imported	Total U. S. Consumption
1912	1,100,000	1,600,000	2,700,000
1913	1,560,000	2,400,000	3,960,000
1914	2,400,000	2,760,000	5,160,000
1915	4,100,000	2,780,000	6,880,000
1916	5,750,000	2,050,000	7,800,000
1917	6,700,000	500,000	7,200,000
1918	5,800,000	290,000	6,090,000
1919	8,180,000	1,150,000	9,330,000
1920	10,250,000	1,850,000	12,100,000

This means that there was an average yearly increase of a million pounds with the amazing total of 1,000 per cent increase over the ten years. In 1917 the Viscose Company built a second plant at Roanoke, Va., but the war prevented full operation that year and the next, and it was not until 1919 that this increased capacity made itself evident. From year to year new units have been added to the Roanoke plant and today it is still the largest rayon plant in the world, with a staff of employees numbering between five and six thousand.

We find in this table that the importations from Europe remained fairly constant for the ten year period. This might seem remarkable in view of the rapidly increasing home production during that time, but it resulted inevitably from the keen pioneering activity that was going on. In spite of the constant expanding of the spinning plants both at Marcus Hook and Roanoke, the demand kept ahead of production; but this situation was not created without great effort both on the part of the yarn manufacturer and the mills. Rayon had to be adapted to various fabrics and the mills had to be adapted to the use of rayon. While the inventors had deliberately tried to imitate the silk worm and its product they had succeeded in producing a distinctly new fiber. Rayon was found to have different characteristics from silk, wool or cotton, and this meant the development of machines for winding on cops, quills, spools, cones and beams and the adaptation of looms and knitting machines to these various characteristics. The personnel had to be trained during years of experimenting and producing in the various types of mills until a general competence and confidence was secured.

DEVELOPMENT CONTINUES RAPID

The second period of ten years, from 1921 to date was one of competition and continued rapid development. Rayon proved its worth during the war by reaching the phenomenal peak price of $6.00 per pound for 150 denier A quality, and on the open market premiums of $2.00 per pound were paid over that price. True, that was under conditions of extreme shortage, but the bare fact that the comparatively new yarn could command such a price under any conditions proved conclusively that its place was assured and that the industry was here to stay.

Such prices called the attention of other interests to the rayon field and of other foreign producers to the American market. Much remained to be learned about rayon, and for that matter still does today, but the most difficult pioneering period was over and the yarn had permeated a great number of the textile branches. Furthermore, basic patents on the viscose process, which by then had proved to be the overwhelming favorite of the four processes, had expired and except for individual machine patents and refinements of formula, the field was wide open. There were still two retarding factors, however, on any tendency toward a stampede into the rayon

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History and Development of the Synthetic* Yarn Industry

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THE synthetic yarn industry of the world is now about forty years old, and that of America only about twenty years of age. Less than fifty years ago synthetic yarn existed only in the imagination of a few men, and today we hear almost as much about these materials as we do about any of the natural fibers. Each variety of our four present types of synthetic yarns is a monument to the success of research in an industry very closely related to, or even a part of, the textile industry. What an incentive this wonderful success should be to the different branches of the textile industry!

Today, as never before, the world is making tremendous scientific and technical progress, and the growth of the synthetic yarn industry into one of the major industries in the United States in about twenty years is at least remarkable, especially when we consider how little progress has been made in certain other fields of the textile industry. This progress is particularly striking when we consider that acetate silk, which is now leading the field in interest, has been developed almost entirely since the war, that is, since 1918. Truly, "a little child shall lead them" refers to the textile industry, and may the successful synthetic yarn industry lead all the textile industry to success! It is extremely interesting to find what a large proportion of the most successful cotton plants today are using synthetic yarns in their products in some way.

HISTORICAL

It has been said that there is nothing new under the sun and this sometimes appears to be true. Although the synthetic yarns are only about forty years old, the fact that the men of long ago gave at least some thought to this problem is proven by the following quotation from Robert Hooke's book on "Micrographia," first published in 1665.

"A conjecture, that it may perhaps be possible to spin a kinde of artificial Silk out of some glutinous substance that may equalize natural Silk." "A pretty kinde of artificial Stuff I have seen, looking almost like transparent Parchment, Horn, or Ising-glass, and perhaps some such thing it may be made of, which being transparent, and of a glutinous nature, and easily mollified by keeping in water, as I found upon trial, had imbib'd, and did remain ting'd with a great variety of very vivid colours, and to the naked eye it look'd like the substance of Silk. And I have often thought, that probably there might be a way found out, to make an artificial glutinous composition, much resembling, if not full as good, nay better, than that Excrement, or whatever other substance it be out of which, the Silk-worm wire-draws his clew. If such a composition were found, it were certainly an easie matter to find very quick ways of drawing it out into small wires for use."

Although Hooke mentions having seen an artificial substance much resembling silk, it is not again found in the literature until about a hundred years later, when some French chemists attempted to produce an artificial silk. The foremost of this group was Reaumur, an internationally known naturalist, physicist and chemist, to whom credit is often given for first suggesting an artificial silk. In his "Memoires pour servir a l'histoire des insects," Paris, 1734, Reaumur proposes that artificial silk fibers be made from varnish or other gums.

SPIDER SILK

A few years later, in 1740, Bon produced stockings and gloves, not from artificial silk, but from yarns made from spider webs and, in fact, it was at one time seriously proposed to utilize spider silk commercially; one of the principal difficulties being the domestication of the spiders.

The next experiments recorded in the literature are those of Dubet, a Frenchman, who killed silk worms by placing them in vinegar, and then drew filaments from the silky gum obtained from the dead worms. These experiments were not very successful and are described in "La Muriometrie, instruction nouvelle sur le lever de la soir," published in 1770. We then have a lapse of about seventy years in the literature, until 1842, when Schwabe reported various experiments upon the production of artificial silk before the British Association in Manchester. It appears that Schwabe was the first to build a machine for the manufacture of artificial silk, as well as the first to obtain a filament by forcing the solution through a fine hole, as is now done on a large scale. The previous investigators had formed their filaments by drawing out the viscous solution.

The next development was the first patent covering the manufacture of an artificial fiber, granted to Audemars, of Lausanne, as British Patent No. 283 in 1855. This was the first proposal to use a solution of cellulose nitrate, which was discovered in 1846, to manufacture an artificial silk by any method resembling our present processes. Audemars prepared his cellulose nitrate from the bast fibers of the mulberry tree, evidently believing that as the silk-worms were fed on mulberry leaves, this material should yield the best artificial silk. The filaments were drawn out of the viscous solution, as had been done by the earlier workers, with the exception of Schwabe. Audemars' process was not successful, but it was along the same chemical lines as the processes later used by Sir J. W. Swan, Weston, Crookes, Swinburne, Wynne, and others in their search for a suitable filament for the first incandescent electric lamps.

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*As used in this paper, the term *synthetic yarn* includes all of the man-made fibers, that is the acetate, nitrate, cuprammonium, and viscose silks, which were at one time collectively known as artificial silks. Later they were collectively called *rayons*, but more recently this word has been applied particularly to synthetic yarn produced by the viscose process, which process now accounts for some 85 per cent of the world's synthetic yarn production.

INSTITUTE FOR RESEARCH IN SOCIAL SCIENCE

THE INFLUENCE OF ELECTRIC LIGHTING ON YARNS

Many textile men do not know that our whole synthetic yarn industry of today is based upon the search for "carbon filaments" for the old "carbon bulbs" of the early electric lighting industry. In the early 80's, after Edison had invented the electric lamp, there was a great demand for cellulose fibers sufficiently long, and with the characteristics necessary to give a satisfactory carbon filament for the electric bulbs. Bamboo and many other long natural fibers were used at first, but were not entirely satisfactory. Many researchers were attracted to this new and rapidly growing lighting industry, and every type of our present four yarns, nitro, cupra, viscose, and acetate silk, was made for use as a filament in electric light bulbs, before it was used for textile purposes.

J. W. Swan was one of those searching for a suitable electric lamp filament, and in 1883 he received British Patent No. 5,978, covering the manufacture of heavy filaments by the cellulose nitrate process. This was the first of the modern patents, and many of the processes later used by Count Hilaire de Chardonnet, Father of the Synthetic Yarn Industry, were adaptions of those developed by Swan. Swan did not overlook the fact that a synthetic yarn would be of interest to the textile industry, and in 1884 and 1885, he exhibited in London the first samples of synthetic yarn and fabrics made from these yarns.

Chardonnet was working along the same lines and received his first patent, covering the manufacture of coarse threads or filaments, from an ether and alcohol solution of cellulose nitrate, on November 11, 1884. In the same year he organized the first company for the commercialization of his process. After years of financial failure, Chardonnet made the first public exhibit of fabrics containing his yarn at the Paris Exposition of 1889. This exhibit attracted new capital to the enterprise and it has been stated that 31,000 pounds of very irregular, single filament yarn were manufactured in 1892, thirty-nine years ago. This was sold under the name of Artiseta.

Chardonnet's first yarn consisted of cellulose nitrate, gun cotton, and was hardly suitable for ladies' wear when smoking. In fact it was so inflammable and dangerous that merchants refused to permit it on their shelves and a law was passed prohibiting its use for certain purposes. One of the early developments was the denitration process, that is, the removal of the nitrate groups from the yarn, leaving a regenerated cellulose yarn, which resembles our present nitro or nitrate yarn in chemical constitution. Our present nitrate yarn was developed from this process.

CUPRAMMONIUM YARN

The cellulose nitrate process was not the only one to attract the attention of the early investigators. Schweizer had found, in 1857, that cellulose, such as purified cotton, etc., was soluble in a solution of copper hydroxide in strong ammonia, and on May 9, 1890, L. H. Despeissis was granted the first patent covering the manufacture of a synthetic yarn by the cuprammonium process. The inventor died before he had completed his patent but the process was taken up and completed by others who have developed the cuprammonium yarn of today.

VISCOSE SILK

C. F. Cross and E. J. Bevan were English chemists of remarkable ability, engaged in the study of cellulose. In 1891, Cross discovered that when cellulose was treated with a strong caustic soda solution, to form soda-cellulose, this soda-cellulose would form a compound with carbon disulfide which is soluble in alkaline solution. They received British Patent No. 8,700 in 1892, covering the manufacture of viscose, and thus started the viscose silk industry. It is interesting to note that viscose silk received its name from the viscous nature of the cellulose solution used to produce the yarn.

ACETATE SILK

The first patent proposing the manufacture of filaments or yarn from cellulose acetate was granted in the United States to A. D. Little, W. H. Walker and H. S. Mork in 1902, and research along this line was carried on in America for about twenty-five years, until the Lustron Company was sold to the Celanese Corporation of America in 1927.

In the meantime Drs. Henri and Camille Dreyfus had been engaged in the investigation of cellulose acetate in Switzerland, where they had produced a little acetate yarn. Early in the World War the Dreyfus brothers were called to England to manufacture cellulose acetate for use in the manufacture of aeroplane dopes. At the close of the war their attention again turned to acetate silk and the present tremendously successful acetate silk is the result of their research and perseverence in this field.

As indicated above, we now have four separate and distinct types of synthetic yarns. All of these are made from cellulose, in the form of cotton linters or wood pulp, the same material as cotton, and are chemically absolutely unrelated to natural silk in composition. In fact their nearest resemblance to natural silk is in their appearance, form, physical, and textile properties.

GENERAL PROCESS OF MANUFACTURE

In a general way, all of the processes of synthetic yarn manufacture are very similar, but they differ quite widely as to the details of each process. In each case the natural cellulose is well purified, to remove all undesirable materials, and then treated in such a way as to dissolve it. The different methods of bringing the cellulose into solution constitute one of the major differences in the various processes of synthetic yarn manufacture.

In each process the cellulose solution is *spun* to give the actual filaments or threads of yarn. This spinning operation bears little resemblance to the spinning of cotton or other short fibers, except that in both cases the spinning is the operation wherein the yarn is actually formed.

In spinning all synthetic yarns, the cellulose solution is forced through fine holes, generally in a small metal plate, called a *spinneret,* into a liquid or gas which removes the solvent, leaving the cellulose behind in the form of filaments or yarn. In other words, the cellulose is precipitated or coagulated in the form of a very fine thread or filament. If the cellulose is forced into a liquid, this process is called *wet spinning,* but if air is used to evaporate the solvent, it is called *dry spinning.*

In the usual process of spinning synthetic yarn, each spinneret has many fine holes and, hence, many individual filaments are formed in one group. These filaments are collected together and twisted, either in the spinning operation or later, to form the synthetic yarn or thread as it appears in the textile industry.

It should be understood, of course, that the above is merely a brief and very simple outline of the general procedure of all synthetic yarn manufacturing processes. Many other more or less important steps are included in each method of manufacture. The various steps may be summarized as follows:

1. Purification and bleaching of the crude cellulose.
2. Solution of the cellulose by various chemical processes.
3. Ageing or ripening of the cellulose solution. (Viscose process only.)

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Rayon's Record

(*Continued from Page* 29)

making business. For a plant sufficiently large to offer a continuous supply for any considerable number of consumer mills, the initial outlay required was millions of dollars; and to operate such a plant there had to be a connection of some sort with a source of technical information in Europe, where all four commercially successful processes were developed, and where up to that time, three of them still remained. While there were several experimental laboratories and units in this country and many able chemists studying the whole subject, still there was by no means any rule of thumb on the making of the yarn, and its commercial success lay in the actual experience of the men who had been at it. However with continental producers witnessing the unqualified success of the Viscose Company in this country over a ten year period, it is not at all surprising to find them eager to enter this field.

INFLUENCE OF THE WAR

Three other factors also influenced the establishing of new rayon factories. During the war there had been a tremendous impetus given to the science of chemistry as a whole and to the chemistry of cellulose in particular, and there were accordingly a number of trained chemists where knowledge and training could be readily adapted to the production of rayon. There were numerous plants for making gun cotton and cellulose gun powder, which after the war were useelss for their original purpose in a commercial way, but which could be readily adapted to the making of rayon. There also was a considerable amount of wealth accumulated during the war in the manufacture of war materials which was now available for investment in the necessarily expensive layout of sizeable rayon factories.

In 1920 there appeared in the field the names of four new companies incorporated for the manufacture of artificial silk yarn. The Tubize Artificial Silk Company of America was incorporated March 3, 1920. It was sponsored by the Tubize interests of Brussels and, therefore, was prepared to manufacture by the nitrocellulose method. It was not difficult to locate a plant in which nitrocellulose had been prepared during the war and the Tubize Company took over the powder plant of E. I. du Pont de Nemours & Co., at Hopewell, Va. Within two years they had their production up to two million pounds, and this capacity has steadily increased each year until in 1929 the company turned out about 8,000,000 pounds.

NEW COMPANIES ENTER FIELD

In that year the American Chatillon Corporation got into production, after having been sponsored by La Soie de Chatillon of Italy and incorporated in April 1928 to manufacture both viscose and acetate rayon in Rome, Ga. In 1930 these two American companies merged and formed the Tubize-Chatillon Corporation and thus combined forces to manufacture rayon by the three main processes of the four in this country. From the latest available figures they have a combined capacity of around 10,000,000 pounds.

Another corporation to appear in the field in 1920 was the Du Pont Fibresilk Company, incorporated April 19th by E. I. du Pont de Nemours & Co. This firm started at Buffalo, N. Y., making rayon by the viscose method as applied by their associates, Comtoir des Textiles Artificiels of Paris. The production was increased at that plant and in 1923 the growing demand for rayon warranted the building of a second. The government powder plant at Old Hickory, Tenn. had not been used since the war and Du Pont now bought it and built a rayon plant there. Three years later they still found that existing factories could not meet the demand for yarn and to keep pace with the speeding industry, the company bought a third site near Richmond, Va., in 1927 and built a third plant for the manufacture of viscose yarn. Meanwhile in 1925 the company name was changed to Du Pont Rayon Company. Their fourth plant, started in 1928 at Waynesboro, Va., was built to make cellulose acetate rayon, which was growing in favor. This plant operates under an agreement with "Rhodiaseta," Rousillon, France. Today the total capacity for the four plants is about 27,000,000 pounds a year.

A third company to appear in 1920 was the Industrial Fibre Corporation of America. It was organized through a merger of the American Borvisk Company and Snia Viscosa. A plant was built at Cleveland, Ohio, and put into production, using the viscose method. In 1925, the production of this company reached over two million pounds. In July of that year it underwent a re-organization and became known as the Industrial Rayon Corporation. Financial control came into American hands and the officers took steps to keep pace with the other manufacturers and the growing demand for the yarn. Units were added at Cleveland, and in 1929 a new plant was built at Covington, Va., which also uses the viscose method. Today this company has a capacity of about 10,000,000 pounds.

The Acme Artificial Silk Company was the fourth to appear in 1920. It was incorporated in December of that year and succeeded the Cleveland Art Silk Company at Cleveland, Ohio, equipped for the production of viscose rayon. In 1925 it was incorporated as the Acme Rayon Corporation. It produces about a million pounds a year.

Meanwhile the Viscose Company continued increasing to provide its share of the now thoroughly popular yarn. In 1921 a third plant was built at Lewistown, Pa. In 1927 a fourth was established at Parkersburg, W. Va., both for making viscose type rayon. Meanwhile a government powder plant at Nitro West, Va., was taken over and equipped to convert cotton linters into pulp for use in the yarn spinning mills. Then in order to fill its customers' requirements for cellulose acetate rayon the company built a sixth plant at Meadville, Pa., for the manufacture of that type of yarn. This plant started producing in 1930. It is a significant fact that except for the war years, there has not been a time thus far since it started in 1911 that the Viscose Company has not had work underway to increase its productive capacity. Today it still leads the world with an annual production capacity of 75,000,000 pounds, or approximately 60 per cent of this country's output.

In 1923 another company appeared in the field to make viscose type yarn. The Belamose Corporation apparently took its name from its Belgian interests combined with American. A plant was built at Rocky Hill, Conn., which in 1925 turned out 358,000 pounds of yarn. This production has been increased until today the plant has a capacity of about a million and a half pounds per annum.

The first plant in this country for the production of cellulose acetate rayon was the Lustron Company of South Boston, Mass. It was started in 1914 and operated for 10 years until 1924, when it was liquidated. The company was not able entirely to overcome some of the peculiarities of cellulose acetate yarn which kept it from becoming as popular as other types.

THE CELANESE COMPANY

The second was the American Cellulose and Chemical Manufacturing Company whose plant was built in 1924 at Amcelle, Md. The British company which started the

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WHAT DO WE MEAN
by
"COOPERATION"?

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Twenty Years' Development in Electrical Equipment

BY H. W. REDING

Textile Engineer, Westinghouse Electric & Manufacturing Co.

THE past twenty years have seen vast changes in all departments of cotton mills. The equipment is different, the methods of operation have changed and what is perhaps more important than these is the change which has taken place in thinking and attitude.

These remarks apply with particular force to the electrical equipment used in cotton mills. There have been a great many changes and improvements in equipment available, but more important are the changes in attitude toward electrical equipment. Twenty years ago the electric motor was considered a rather convenient substitute for the steam engine having certain desirable features such as flexibility but the fact that properly applied electrical equipment could become a potent factor in cost reduction was realized by very few in the industry. Even with today's viewpoint there are a great many unexplored and unappreciated possibilities but there has been a very marked change of attitude in this period of twenty years.

INDIVIDUAL DRIVES

With respect to equipment, the most noticeable change is the greatly increased use of individual drives. In 1911 the average capacity per motor in cotton mills was approximately 35 HP. Today it is not far from 5 HP. The introduction of individual drives on cards, roving and spoolers in addition to the very extended use on spinning, twisters and looms accounts for the remarkable decrease in this average.

To consider all of these changes would be entirely beyond the scope of this discussion but a few of the more important advances are mentioned briefly below.

CARD MOTORS

The individual motor for cotton card drive is one of the motor applications which has made its appearance within the last few years. This had been considered as a practical and economic impossibility owing to the difficulty in starting, and the necessity of meeting the requirements of stripping and grinding. However with the improvement in motor design it was possible to build a small motor with satisfactory operating characteristics to which would start the card and means were then provided to take care of stripping and grinding. The motor control switch provides for reversing the direction of rotation and in this way the cards may be run for grinding. One of the satisfactory methods of stripping is to provide a portable motor driven stripping brush which may be plugged into a receptacle on the card during the stripping period. Fig. 1—shows a modern individual card drive with the portable stripper roll motor in place.

V-BELT DRIVES

Effective in protecting machinery from jerks and shocks the multiple V-belt drive is another newcomer. Drives of this kind have been quite extensively applied on spinning frames, twisters, roving frames and other classes of textile machinery. These drives provide a simple, reliable and easily applied drive and give cushioned starting. A typical cog-belt drive on a roving frame is shown in Fig. 3.

SPINNING MOTORS

The individually motor driven spinning frame was known twenty years ago but very few of these drives were actually in use. Large group drives were most commonly used with some four frame drives. At present, practically all new machinery is provided with individual drives. There have been great improvements in the drives, method of mounting and other details and there have been some unusually interesting advances in the design of the motors themselves. Every effort is exerted to produce electrical equipment which will operate at the lowest possible maintenance cost and with the greatest reliability and continuity.

One very interesting and important feature now available in the modern spinning frame motor is the feature of the replaceable stator core and winding. In spite of the most careful motor construction and maintenance, motors will be damaged from time to time by emergency

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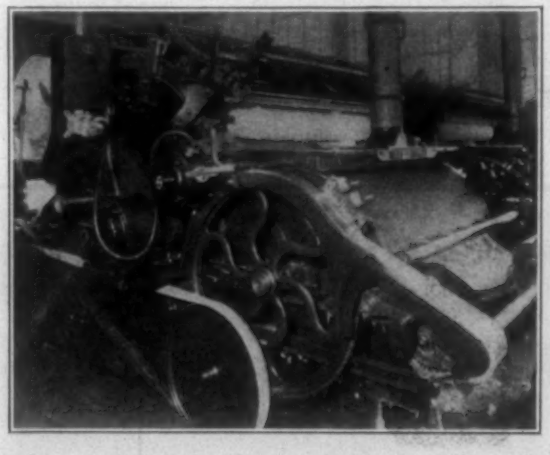


Fig. 1—Individual card drive showing portable stripper motor.

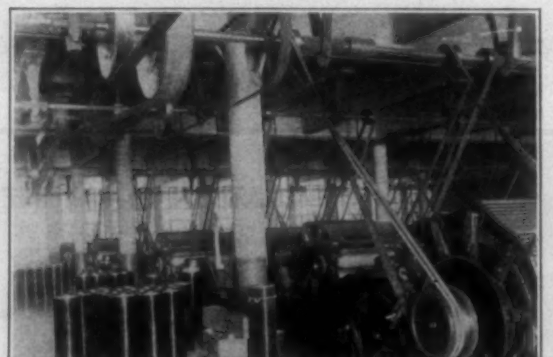


Fig. 2—General view of a group driven card room built some sixteen years ago.

Then 1911 and Now 1931

The Old Timers Speak

The following letters from prominent mill men, written to us on the 20th Anniversary of the *Southern Textile Bulletin,* were received too late to be grouped with other similar letters which appear in this issue.

The letters, which compare manufacturing conditions between the old mills and the mills of today are of unusual interest.—Editor.

In 1896 I entered the employ of the Union Cotton Mills, at Union, S. C., which, you will see, has been pretty close to thirty-five years ago. At that time the mills were running 72 hours a week, the usual starting time was six o'clock and the night whistle blew about 6:45, provided, there was no time to be made up. It seemed to me, however, that there were more days when time was made up than otherwise, the majority of lost time being caused by belts breaking or lapping up, or troubles in the old time steam plants. Instead of having half holiday on Saturday, mills ran until 4:45 to 5:00 p. m.

There were very few people engaged in manufacturing at that time who knew anything about cotton or manufacturing processes. Cotton was graded for color and trash only and, of course, there was great variation in the length of the staple from time to time, without any knowledge as to what the cotton actually was. The work was often times torn up from this and other causes. About the only thing that was ever done in those days to remedy conditions was to put in more twist or change the draft gears. When the work begun to run better, the twist and draft were again changed. This was a, more or less, constant condition; yet, it was very rare you went into a mill in those days and found it torn up, for the reason that when the work began to run bad, additional hands were put to work, regular operatives being relieved of part of their job and at the same time a part of their payroll.

I recall back in those days it took a rattling good spinner to run six sides, the majority of spinners being on four sides, and the price was 7c to 8c per side for print cloth yarns. The frame hands made around $4.00 to $5.00 a week, and I remember very distinctly card grinders were paid 65c a day. Weavers ran six and eight plain looms, making from $4.50 to $6.00 a week. The doffing was all done by little fellows, ranging from ten years of age, up, and they received from 25c to 35c a day. One grown doffer today can do about as much work as several of the little fellows did thirty odd years ago and, of course, his work is done better. I recall that the doffer boys were usually about the meanest set of kids around the job and, between doffs, these boys were at that time locked up in a big room in the tower, which had been rigged up as a play-house for them. Whenever they were turned loose, it was impossible to hire enough men to keep window glass put in.

Those of us, who have been connected with the business so long, remember that the sweeping was all done by children from eight years, up to ten or eleven. One good sweeper today probably does as much work as half a dozen of these kids who broke down as many ends in the spinning room, when sweeping, as should ordinarily come down from other causes. About the same condition applied where these kids were sweeping in other departments.

At the Union mills, we had incandescent lamps in all departments, except the weave room. Back in those days, it was the proper thing to have arc lights in the weave room, and in a large weave room there were usually employed a couple of men putting in new carbons and otherwise working on these lights to keep them going. The light was beautiful, but the shadows were terrible and accounted for a great deal of bad weaving.

Cotton was all opened by hand in the picker room and torn up in large piles and fed directly, by hand, into the breaker pickers. Opener machinery was unheard of.

Print cloth manufacturers figured that they must have strict middling cotton to make satisfactory cloth. As the Union Mill was built in 1894, we did not have any of the old stationary top-flat cards, but we did run railway heads in connection with three processes of drawing, all of which had leather covered top rolls. My recollection is that the Draper loom was being put on the market along about 1897 or 1898. Our spinning was all equipped with 49-D spindles, which at that time was the last word.

Cotton was selling at around 4c to 5c a pound and people were very poor. In order to get a house it was necessary for a family to furnish at least one hand per room. Some of the families were very large and "everybody worked but father." Of course, this was not true in every case, but a number of fathers were loafers. School facilities were very poor and hardly any of the children went to school, most of them going in the mill as soon as they were eight or nine years old.

Mill villages were neither lighted nor equipped with sewerage, and there were no amusments. When people did not get away from their work at seven o'clock at night, after getting supper, it was time to go to bed, so as to be able to get up and be at work the next morning at six o'clock.

There is no need for comparing these conditions with present day conditions, for the reason that a great majority who will read this can draw their own conclusions.

Thirty-five years ago practically all the Southern mills were on coarse goods, with yarns ranging from eights and tens, up to twenties. There were very few print cloth mills, and print cloths were considered as fine goods. I recall that along about 1897 or 1898, Colonel T. C. Duncan, who was president of the Union Cotton Mills at that time had a conference with H. D. Wheat, who was president of the Gaffney Manufacturing Company, looking to the organization of an association of print cloth mills, which would be known as the South Carolina Fine Goods Association. I acted as secretary of the conference at which time a proposed plan of organization, including a constitution and by-laws, were drawn up. However, there was not much more co-operation in those days than we have today, and the organization was never perfected. Just think what a gap there is between present day fine goods and print cloth numbers, which were considered fine yarns thirty-five years ago.

Trusting that these rambling recollections may be of interest to some of your readers, and with kind personal regards, I am—*Geo. M. Wright, President, Republic Cotton Mills, Great Falls, S. C.*

Comparing these serious times with the many changes which have taken place in the textile industry during the past thirty years my mind immediately turns back to the old rocky hills and the balky mule which I was trying to plow in a new ground when I read the startling story of a great cotton mill starting up which was the most modern of its day. Leaving the plow handles behind I found a place to labor in an old time cotton mill which is still in operation. Along at this time married men with families to support received the sum of 72 cents per day and these days were twelve hours long. I was assigned to card grinding. We had only two makes of cards, one of these was the Whitin type and the other was the old Bridesburg, both with wood top flats and railway heads. The sliver from each one of these heads weighed 84 grains per yard. At these railway heads it was hard to keep the weights on the sliver. Sometimes when the weather was very damp we had to make a great many changes during the day's run.

In the same mill I leraned to do almost everything. The boiler was fired with cord wood and almost every machine part hard to be repaired in the mill. We often spent many days in the blacksmith shop repairing the old tin cylinders in the spinning frames. These were taken out, placed on a wooden trough and a straight edge was held on them to true them up. In these early days I learned to be a machinist and a general all-around repair man. During spare time I took a textile course and lay down under the speeders for hours at the time studying the complicated mechanism of a concave and convex cone trying to get a perfect tension. Dyes in those days were not fast and a portion was often seen the faces of the operatives or left on the machines. But fortunately, for us with our crude methods, we had not learned the meaning of the word "Curtailment," and the mills could sell, in that day, all the goods manufactured.

Two or three years later, having learned carding and spinning, I attempted to gain some knowledge of weaving and after becoming competent enough to earn the enormous wage of one dollar per day as a carder my desire to learn weaving was so great that this very lucrative job was given up for a place as helper in a fancy weave room of 800 looms, which was just beginning to make its way into the South. Later I was given a very responsible position as loom fixer at the great sum of one dollar and twenty-five cents per day. It was here that I had visions of becoming a sure enough mill man when one of these things called a "panic" came and I lost my valuable position. Fortunately again, just a little later I got a position as assistant in a small mill and by constant application and long hours of hard dirty work in a few years was offered a position as superintendent of a mill. It was here that my earlier experience proved of great value. Although nothing was known of high speed, long drafts, and single process picking, yet we had our difficulties. Having passed through the World War driving the mills to the limit for production, no regard for cost we reached the peak.

We successfully past through the depression of 1920 where we learned our first lesson in economy and have survived to the present to live through a period when the greatest effort is required to handle an organization to manufacture goods sold in the most competitive markets that the world has ever known. And we expect this condition to continue as the public has learned that goods can be made better and cheaper. And only those who are able to solve problems in refined management and equipment can hope to attain or hold a place in this competitive age. But we fully believe that the opportunity for a young man is much brighter and better today than when we began thirty years ago.

My name was placed on the subscription list for the first edition of the Southern Textile Bulletin and since that day I have been a constant reader of it, which has assisted me many times, especially in times of disappointment. Your editorials rang clear and true bringing courage to many who were trying to improve their condition. —*I. B. Covington, Vice-President and Superintendent, Wade Manufacturing Co., Wadesboro, N. C.*

In looking back over the past three decades of the textile industry in the South, we "old-timers" have seen so many improvements taking place that if a graduate from one of our textile schools of today could be carried back to the year 1900 and placed in a mill he would hardly know that he was in a cotton mill.

To begin with, he would, instead of working a ten-hour day, be called upon to work twelve hours, and about ten hours on Saturday. When the writer started in the mill the hours were from 6:30 a. m. until 7 p. m., with one-half hour for dinner. And on Saturday we stopped at 5 p. m.

The writer was fortunate enough in 1900 to start in a modern mill of that day. But this mill knew nothing of humidifiers and such things as one-process pickers, improved card stripping devices, long draft, wide gauge, large package spinning, automatic spooling and high speed warping. Such things had probably not been dreamed of, nor drawing-in and tying-in machines, and many of the refinements of construction and improvements in the loom of today.

Without all of these improvements, to find a mill with good running work was a very rare thing. With the generally bad running work of that day and the unskilled help it required more than twice as many operatives to run the same amount of machinery as it does today. Spinners were running from four to eight sides, and the writer recalls very clearly that with children twelve to fourteen years of age it required about four times as many doffers in the spinning room as it does today.

In the drawing-in room we would find girls drawing in with very small girls handing the warp threads to the drawing-in hands.

There was very little thought given to keeping the mill clean and sanitary, and with all the adverse conditions of long hours, bad running work and dirty surroundings, the wages were less than half of what they are today. It was often the custom to put a whole family's pay in one envelope, which was given to the head of the family, generally the father, and often these hard earned wages were thrown away in the saloon, drinking and gambling.

In the morning about school time, instead of seeing the streets filled with bright, clean-faced, neatly dressed boys and girls up to sixteen and eighteen years of age on their way to our fine graded schools and high schools of today, you would see a few poorly dressed children up to twelve, and possibly fourteen, years of age on their

(*Continued on Page 50a*)

CLASSIFICATION OF SOUTHERN MILLS

In the table given below, an accurate tabulation of the spinning, weaving and knitting mills in the Southern States is shown, together with their equipment. The mills are grouped according to their equipment and product. Mills that spin only are grouped accordingly and the same is true of the mills that spin and weave, spin and knit, knit only and weave only. The table also gives the number of mills in each State, the number of spindles, looms and knitting machines, and the total figures, by States and for the whole South.

The convenient arrangement of the table clearly shows each division of the mills, together with their equipment. The information contained in the table is compiled from Clark's Directory of Southern Textile Mills, January 1, 1931.

STATE	SPINDLES						LOOMS				KNITTING MACHINES							
	Spin Only		Spin and Weave		Spin and Knit		Spin & Weave		Weave Only		Spin & Knit		Knit Only		Total	Total	Total	Total
	Mills	Spindles	Mills	Spindles	Mills	Spindles	Mills	Looms	Mills	Looms	Mills	K. M.	Mills	K. M.	Mills	Spindles	Looms	K. M.
Alabama	30	367,602	54	1,497,938	4	20,256	54	33,516	5	1,449	4	339	17	2,566	113	1,885,796	35,009	2,905
Arkansas	2	12,748	4	39,728	—	—	4	683	—	—	—	—	—	—	6	52,476	683	—
Georgia	38	622,628	97	2,639,684	8	70,144	97	56,620	8	662	8	2,868	38	5,940	198	3,324,456	57,282	8,808
Louisiana	—	—	3	86,620	—	—	3	2,466	—	—	—	—	3	774	6	86,620	2,466	774
Mississippi	3	26,784	12	175,700	1	5,000	12	5,047	1	90	1	400	4	259	21	207,484	5,137	659
North Carolina	201	2,608,274	144	3,621,064	11	281,120	144	88,944	43	6,540	11	2,414	157	24,829	580	6,435,962	95,484	27,243
Oklahoma	—	—	2	30,912	—	—	2	558	—	—	—	—	—	—	2	30,912	558	—
South Carolina	25	252,610	132	5,417,450	2	11,156	132	133,607	13	573	2	248	11	1,403	194	5,670,560	134,212	1,635
Tennessee	13	194,152	13	339,774	9	146,620	13	8,829	5	1,012	9	2,496	66	14,087	113	680,546	9,841	16,583
Texas	5	38,336	23	238,372	—	—	23	5,944	—	—	—	—	4	288	32	276,708	5,944	288
Virginia	3	26,988	16	700,898	1	19,632	16	19,239	20	3,031	1	34	25	4,652	71	727,886	22,270	4,686
Totals	320	4,150,122	500	14,788,140	36	553,928	500	355,453	95	13,357	36	8,799	325	54,798	1,336	19,379,406	368,886	63,581

Note:

Alabama—1 mill spins, weaves and knits and one mill weaves and knits.
North Carolina—3 mills spin, weave and knit and one mill weaves and knits.
South Carolina—1 mill spins, weaves and knits and one mill weaves and knits.
Virginia—1 mill spins, weaves and knits.
The total number of mills includes plants, such as dyeing and finishing plants, braiding mills, etc., the equipment of which is not listed above.

"The First 20 Years Are the Hardest"

BY D. H. HILL, JR.

A WHOLE lot of cotton has gone through the mills since the first issue of the Southern Textile Bulletin made its appearance 20 years ago this week.

A great many changes have naturally taken place in that time. Many of them are touched upon by various writers in this issue. However, in looking through the first issue of the Southern Textile Bulletin, in some respects at least, a reader might skip back 20 years and think he was reading this week's news. For instance, the market news March 2, 1911, reflects the same conditions that have been in the news for the past year or more. In the market pages 20 years ago such expressions as "hand-to-mouth buying," "lack of confidence in buying" and similar other phrases have a mighty familiar ring. Hand-to-mouth buying doesn't seem to be such a modern improvement (?) after all.

MARKET PRICES

A comparison of prices of cotton goods and yarns in 1911 and 1931 might give you something to think about. The average print cloth construction was quoted just a quarter of a cent a yard under today's prices. And carded yarn prices ranged around 2 cents a pound higher than this week's quotations.

Of course, the intervening years have seen prices go to what now look like sky-high limits before sliding down hill again, but there is very little difference between prices now and in 1911.

MEN IN THE NEWS 20 YEARS AGO

One of the most interesting features of our first issue was the large number of personal items. There were 77 in that issue. At that time, many superintendents and overseers changed jobs with startling frequency. They went "on the loose pulley" on the slightest pretext and apparently had little trouble in finding other jobs. The steady decrease in this turnover in recent years is of course a fine thing for the men and the industry. The personal news also showed that some of the men mentioned had started on the long climb upward that carried them into higher positions which they still hold.

In the news we find among other items, the following:

W. M. Sherard, who retired from the mills some years ago and who is now mayor of Hendersonville, N. C., had been made superintendent of the Alice Mills, Easley.

C. L. Upchurch, now in the machinery business, was overseer spinning at the Shelby Cotton Mills.

R. H. Layton had just moved from Atlanta to Charlotte.

H. L. Gobbell was appointed superintendent of the Glencoe Mills, Columbia, a position which he still fills.

E. G. Jessee had just been promoted from overseer weaving to superintendent of the Watts Mills, Laurens. After many years there, he is now president of the M & J. Mills, of Laurens.

S. W. Mimms was superintendent of the Granby Mills, Columbia. He is now employment manager at the Pacific Mills there.

The above items were picked at random from the personal pages. Among other men mentioned were James Chapman, Sr., M. R. Macomson, Alex Howard, W. P. Leicester, B. L. Ledwell and others.

NEW MILLS

New mills that were just being planned, or just getting into operation 20 years ago included the Meritas Mills, Columbus, Ga.; the Dunson Mills, LaGrange, Ga.; Dunean and Westervelt (now Judson) of Greenville, and Pickett Mills, High Point.

In the mill news items we find that the Bellevue Mills, Hillsboro were adding new dyeing equipment, as were the Fort Mill Manufacturing Company and Victoria Mills, Rock Hill. McAden Mills, McAdenville, were installing drying equipment. The Siluria Mills, Siluria, Ala., had just purchased 400 Stafford looms from Fred H. White, of Charlotte.

The St. Pauls Mills, St. Pauls, N. C., were installing humidifying equipment bought from Stuart Cramer, of Charlotte. Cleveland Mill & Power Co. had purchased humidifiers from G. M. Parks Company.

The Simpsonville (S. C.) Mills were building an addition. Royal Bag & Yarn Mills, Charleston, S. C., were starting up 100 box looms on ginghams.

MERGERS

The idea of a big merger of the carded yarn mills doesn't seem to be such a new plan. A meeting was held in Charlotte in 1911 to consider a merger plan. In our editorial columns we find quite a bit about the proposed merger, but like the others that have been proposed since then, it never got past the talking stage. It appears that in 20 years, the carded yarn mills have not yet worked out a sound basis for a merger.

There was effected 20 years ago, however, a merger by Lewis W. Parker, of Greenville, who formed the Parker Mills Company. The company later failed and was re-organized into the present Victor-Monaghan Company and the Pacific group of mills. The mills grouped by Parker included Victor, Monaghan, Apalache, Arlington, Olympia, Beaver Dam and Greer. They had a total of 357,952 spindles and a capitalization, after the merger, of $10,000,000.

OUR FIRST ADVERTISERS

In the first issue of the Southern Textile Bulletin we find advertisements from the following firms:

Draper Corporation.
Whitin Machine Works.
G. M. Parks Co. and Stuart W. Cramer, later consolidate as the Parks-Cramer Co.
William Firth.
Metallic Drawing Roll Co.
S. A. Felton & Sons.
Southern Railway.
Seaboard Railway.
Ashworth Bros.
A. Klipstein & Co.
Grinnell Willis & Co.
Psarski Dyeing Machine Co.
New Brunswick Chemical Co.
American Moistening Co.
Joseph Sykes Bros.
Stafford Co.
C. G. Sargent's Sons Corp.
Charlotte Supply Co.
Kilburn Lincoln & Co.
David Brown Co.
F. W. McLanathan & Sons.
Arabol Manufacturing Co.

(*Continued on Page* 52)

US

For the
NEW
TEXTILE
ERA
1931

US

BELIEVING thoroughly in the future of the Textile Industry, with a confidence supported by our many years of intimate contact with its principals, we look upon 1931 as the beginning of a new era of textile manufacture; a year of progress and of unique developments actuated by sound, forward-minded policies.

Alert to these challenging factors, we therefore join in cooperating with the Industry toward more efficient and continually modern methods of manufacture and distribution . .

1 To continue to use our resources and modern methods of manufacture that textile men can be assured of engineered excellence with every shipment of US Bobbins, Spools and Shuttles.

2 To promote economies in mill time and materials—by supplying mill men with true-running, long-lived performance-value in all US Products.

3 To place at the disposal of textile men our Engineering and Research Departments for encouraging definite improvements in the design of bobbins, shuttles and spools.

4 To encourage the development of new products to meet new conditions and new methods in textile manufacture.

5 At all times to extend to the Textile Industry willing and capable service particularly as it may apply to bobbins, spools and shuttles *in the manufacture of which the Company has over seventy-four years of experience.*

U S Bobbin & Shuttle Co.

MANCHESTER, N. H. MONTICELLO, GA.

Established 1848

Jas. H. Billington Co.

Manufacturers of

Penna, Rock Maple Bobbins
Penna, Rock Maple Spools
Mountain Dogwood and Persimmon Shuttles
"Danforth" Pure Oak Short Lap Leather Belting
"Batavia" Rawhide Loom Pickers

"Buy from the Manufacturer Direct"

113 Chestnut St.,
Philadelphia, - - Pa.

MERROWING
—Established 1838—

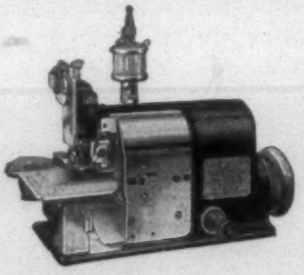
will fill your need for

FLAT BUTTED SEAMS

to join ends of piece goods prior to processing—demanded more and more by converters and valuable in your own processing.

Send for details regarding

Merrow Styles 60 ABB and 60 D3B



MERROW
Trade Mark
Reg. U. S. Pat. Off.

Let us demonstrate the work of these and other machines on your own fabrics

THE MERROW MACHINE CO.
8 Laurel Street Hartford, Conn.

PERSONAL NEWS

J. H. Clark, formerly of Goldsboro, N. C., has accepted the position of overseer of spinning, winding and finishing at the Smithfield Cotton Mills, Smithfield, N. C.

R. L. Sullivan, formerly general superintendent of the Icard Cordage Company, Icard, N. C., has been appointed general manager of the Sherwood Mills, Inc., formerly the Liberty Spinning Mills, Maiden, N. C.

D. F. Sherrill, formerly of the Cramerton Mills, Cramerton, N. C., has been appointed overseer of carding and spinning at the Sherwood Mills, Inc., formerly the Liberty Spinning Mills, Maiden, N. C.

C. D. Webb, of Augusta, Ga., is now overseer of weaving at the Aiken Mills, Langley, S. C.

W. G. Holt, of Augusta, Ga., has become overseer of night carding at the Aiken Mills, Langley, S. C.

A. Ferguson Macintyre has resigned as treasurer and general manager of the Fitzgerald Cotton Mills, Fitzgerald, Ga.

J. H. Mayes, president and superintendent of the Cochran Cotton Mills, Cochran, Ga., will hereafter also be manager and superintendent of the Fitzgerald Cotton Mills, Fitzgerald, Ga.

Mr. Stanley, of Cumberland, Mr., has become superintendent of the Alpine Cotton Mills, Morganton, N. C.

W. N. Darby has resigned as superintendent of the Alpine Cotton Mills, Morganton, N. C.

J. B. Boyter, second hand in the spinning department of the Aragon-Baldwin Cotton Mills, Whitmire plant has been promoted to overseer of spinning at the Baldwin plant of the same company at Chester, S. C.

S. B. Pruitt, overhauler in the spinning department of the Aragon-Baldwin Cotton Mills, Whitmire plant has been promoted to second hand in the spinning department.

James I. Pritchett, Sr., veteran Danville banker and financier has been elected president and treasurer of the Riverside and Dan River Cotton Mills Company, Inc., to succeed the late H. R. Fitzgerald. The action was taken by the board of directors at a meeting held at the company's offices at Schoolfield. The board also elected Malcom Kerr Harris, attorney for the corporation, to be assistant president and treasurer.

Thomas Halton's Sons Improve Southern Service

Dennis J. Dunn, of Philadelphia, has established his headquarters at Charlotte as the Southern representative of Thos. Halton's sons, of Philadelphia, builders of jacquard machines.

Fred H. White, of Charlotte, will continue to represent Thos. Halton's Sons in the South, but on account of the technical service needed in dealing with purchases of jacquards and in order to render additional service to their customers they will also keep Mr. Dunn in the Southern field.

Mr. Dunn has had long practical experience in jacquard weaving and left a position as manager of a large specialty weaving mill in order to accept his present position.

Thos. Halton's Sons are the largest independent manufacturers of jacquards in the United States, that is they are the largest organization which manufacturers jacquards only. They have been in business fifty years and

LANETT
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TRADE MARK

SPECIALTIES

IN WHICH WE EXCEL

LANETT specializes in doing a good job on ducks, drills, twills and wide goods of every description up to 72 inches. We originated the non-scratch finish. We lead in water-proofing. We do superior napping and shearing. We have brought mineral and sulphur dye to high perfection. And you get delivery from Lanett when promised and up to Lanett standards always.

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3440-3441

Durene Enjoys Style Revival

BY EMMA L. FETTA

Durene Association of America

OF timely interest is the revival in importance of mercerized cotton.

For over a year eighty-five per cent of the cotton mercerizers in the United States have been banded together in a joint effort to maintain standard production, to define quality in mercerization, and to create newer and broader uses for their product in both knitted and woven fabrics and ready-to-wear.

Because heretofore the term "mercerized" had borne many interpretations, no distinctive meaning or precise etymology had existed in the mind of the average user. This important national group of mercerizers therefore selected a general term for the common use of themselves and all manufacturers and retailers handling or selling mercerized cotton of the high standard quality that has been set. The name decided upon was "durene" compounded from "durable" and "sheen." It appropriately describes the wearing qualities and appearance of quality mercerized cotton, without signifying an individual firm's brand.

Durene, thus, becomes a general if not a generic name. It is now in use throughout the United States by mercerizers who are members of the Durene Association of America, by some 400 licensees or manufacturers of garments of fabrics made from standard quality durene yarn; and by many of the leading department and specialty stores of the country who have welcomed a character-determining, and distinguishing terminology.

This comparatively recent action on the part of the leading American mercerizers comes at the end of just about 24 years following the first firm entrenchment of mercerized yarn interest in this country. Before 1906 not a great deal was heard about mercerized cotton on this side of the Atlantic. Its first use here was as the warp in decorative fabrics. The knitting industry—now such a huge consumer of durene yarns—was at first luke warm in its attention to mercerized cotton although later—and now—enthusiastic. But by 1906 it could be said that this textile was looked upon with favor by American manufacturers and that its uses and usefulness were growing.

During the folowing twenty-four years, however, the name of cotton thus processed was bandied about until in itself it meant nothing by way of a standard quality identification. Combed or carded, long or short staples, weak or strong ones, yarn or piece processing—any of these virtues or weaknesses might be meant by mercerized cotton.

The return of longer skirts and use of firmer foundations with hook garters introduces once more the practical stocking top of sheer knit but stout quality. A number of hosiery manufacturers are attaching durene knit tops to silk hosiery. Durability and close affinity in texture, and lustre to the silk is recommended in the durene tops. Toes and heels are also appearing in durene knits.

The hosiery illustrated is from the Durham Company.

Moreover, the fashion application of these most softly lustrous and strongest of the cottons was not very definitely defined. When quality mercerized cotton appeared in a smart fabric the virtue of its presence was not capitalized upon. For all of these reasons, it is believed to be signally important and desirable that the group of American mercerizers who are now members of the Durene Association of America should have joined hands to the ends of familiarizing the public with the best mercerized cotton; to the ends of developing more and more fashion-worthy uses for the yarn thus discriminatingly processed; and making possible the identification of the unvarying quality in the best output of this country through a general qualitative term.

It is interesting to note that the history of mercerization has come forward with scientific precision—not with sky-rocketing ballyhoo. John Mercer took out his patents in 1850. These covered ten years of scientific work. It was not, however, until 1890 that the present means of imparting the soft, lustrous sheen which characterizes durene cotton today was applied by H. A. Lowe, a chemist of Manchester, England.

Very likely John Mercer would have discovered the secret of lusterizing spun cotton if, during his years of experimentation, he had but used long staple cotton (one of the stipulations of the Durene Association of today.) Nor did Mercer subject his yarns to tension while working to obtain increased strength and absorptive qualities.

Lowe, in adding tension to the "Mercer-izing" process, rounded out its value enormously and lifted cotton into the field of luxury and beauty, which the best mercerized cotton now justly holds.

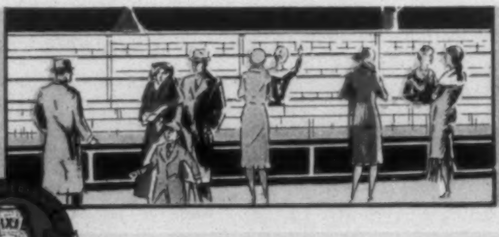
Lowe's ideas were carried still further by two other enterprising investigators—Richard Thomas and Emanual Prevost of Crayfield, Germany. These two in 1895 patented variants they had developed on Lowe's ideas. Thus between Mercer and Lowe, Thomas and Prevost, the present method of cauticizing under tension was developed so definitely that little change in fundamental processing has been necessary from that time. By 1896

(*Continued on Page* 47)

When You Plan A New Number

Use Dixie Durene for SALEABILITY

The story of durene is reaching the consumer through advertising in national magazines. Retailers and wholesalers are being interested through trade papers and actual demonstrations. When you put Dixie durene in your new numbers, you cash in on the sales possibilities created by this consistent durene campaign. We will gladly send you more information about Dixie durene as a sales builder. Just write the Dixie Mercerizing Company, Chattanooga, Tennessee.



DIXIE DURENE · A Product of Controlled Manufacture

DIXIE MERCERIZING COMPANY

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Cameron & Pfingst
308 Chestnut Street
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SOUTHERN
TEXTILE BULLETIN

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Twenty Years Or More Ago

We had intended to devote most of the editorial space in this issue to a comparison of textile conditions of today with those of twenty years or more ago, but coincident with our twentieth birthday has come the culmination of a great movement in the cotton textile industry, the voluntary agreement to eliminate the night work of women and children and we have felt that we could best serve the industry by devoting our space to that problem.

The first cotton mill experience of the editor of this journal was sweeper at the old Ada Mill in Charlotte, N. C., in November, 1898. He received 50 cents per day which was at that time the usual wage for such work and worked 66 hours per week which was a concession from the 72-hour week which had prevailed a few years prior to that date.

The South knew little of cotton manufacturing in those days and the job of a sweeper was heavy because it was almost a daily occurrence for the work in the card room or the spinning room to go to pieces and waste cotton would cover the floor.

About a year later, at the request of D. A. Tompkins, the father of cotton manufacturing in the South, he became secretary and treasurer of the Ada Mill and had his first experience with the merchandising methods of Southern mills.

Since the days of 1898 the South has learned much about manufacturing cotton and nowhere in the world are there more efficient or better trained superintendents and overseers.

The mill operatives of the South have progressed much, live better and have advanced in culture and self respect.

There are today many high grade mill executives who are excellent business men and fine merchants, but the average mill executive, of the South, is no better and no more of a merchant than the average of 1899 or 1900.

The industry as a whole has gone forward but the mill executives of the South have, as a whole, failed to keep pace with the machinery, the operatives, or the superintendents and overseers.

Many mill managers sacrifice goods today, and sell freely below cost of production just as they did in 1899.

Production has vastly improved and quality has become equal to that of any other section in the world, but methods of merchandising have to a large extent stood still.

Based upon twenty years with the Southern Textile Bulletin and twelve years previous mill experience we can assert that the industry has made steady and satisfactory progress in everything but merchandising but we are still hoping for betterment in that division and a new era seems to be dawning.

We wish to express our appreciation of the many kind expressions which have come to us on this, our twentieth birthday, and our hope that we may be spared to serve the textile industry for many more years.

No publication and no editor has ever had finer support than has been accorded the Southern Textile Bulletin by the men of the textile industry of the South.

The Test of Integrity

In the fall of 1899 the editor of this journal, who was then treasurer of a mill manufacturing 20/2 yarns, attended his first meeting of cotton manufacturers.

It was a meeting, in Philadelphia, of carded yarn manufacturers and, as the managers of twelve mills manufacturing 20/2 yarns sat around a table, each and every one solemnly pledged that for a period of sixty days, he would not sell a pound of 20/2 for less than 15 cents (the price then was 12½ cents). Less than thirty minutes later we overheard one of the group accept a large order at 14 cents, in spite of the positive pledge he had just given.

As the result of the other eleven adhering to their pledges an upward movement began and in less than the sixty days 20/2 yarns sold at 25 cents and the mill managed by the man who broke his pledge suffered severely by reason of his infidelity.

We learned at that little group meeting in Philadelphia in 1899 and have known ever since that agreements made by cotton manufacturers will be violated without compunction by a small

(*Continued on Page* 43)

number of those who sign, or in other words we know there are always within the industry a few men devoid of integrity.

The man who is dishonorable enough to violate a pledge which he has given is not to be trusted in other matters or worthy of the respect of his fellow men.

Who has not heard a young boy say, "Willie Smith's father lets him stay up until nine, why can't I?" or "Johnny Black's father lets him go in swimming, why can't I?"

Who has not heard the father of such a boy say, "It makes no difference to you what Willie Smith or Johnny Black are allowed to do. I am doing what I think is best for you."

One of the best lessons for a young boy or a man to learn is that he shall do what is right and proper without regard to the actions of other people.

Some cotton manufacturers seem to have the attitude of the young boy who feels that he is justified in doing something, which he knows to be wrong, because somebody else has done the that thing.

The integrity of the cotton manufacturers of this country is now at stake and the industry will suffer severely if it does not stand this test.

An overwhelming majority or 83 per cent of the cotton textile industry has voluntarily signed a pledge that for one year, at least, they will not employ any woman, or any boy under 18 years of age, at night.

There are, without doubt, among those who signed the pledge, some who are without integrity or honor and who will violate that pledge.

The danger however is not with that dishonorable minority but with a larger number who noting those violations will use the boy argument of "Willie Smith and Johnny Black are working women and boys at night, why can I not do the same?" And eventually they will convince themselves that they should and they may join the dishonorables.

Every man who signed the pledge is bound by that pledge and the fact that some other man violates his pledge should not cause him to forget his own integrity or honor.

Even those who did not sign the pledge should be interested in its observance because if the elimination of the work of women and minors at night is not secured through this agreement nothing can prevent its elimination by legal restrictions at the next meetings of the State legislatures.

It will irk some to know that a few who would not sign the agreement will be employing women and minors at night and possibly profiting thereby, but they should remember the boy who always wanted to be allowed to do something because some other boy had that privilege and realize that a man's conduct should not be based upon the action of others but upon principles of what is right and proper.

If those who signed the pledge, or all but a small dishonorable minority, comply with its restrictions the cotton textile industry will soon become prosperous and profitable and if a mill is earning profits it should not worry because some who did not sign the pledge or a few who dishonestly violated it after signing happen to be making a greater profit.

If, because a few violate their pledges, others feel that they are free to do likewise and night operations again become general, overproduction will appear and there will be a period of no profits and bankruptcy which will ultimately be followed by such legislation as will entirely and permanently eliminate the employment at night of women and minors.

The integrity of those operating the cotton textile industry is now to be tested and much will depend upon the outcome of this test.

Our Annual Review

Clark's Annual Spindle Increase List shows that during 1930 the increase in spindles in the South was 150,688 which is by far the lowest since we have been compiling the records and compares with 419,790 in 1929 and a ten year average of 457,000.

Our list does not take into consideration new or second hand spindles purchased to replace existing equipment and is compiled by making a comparison of the spindles reported on January 1st, 1930 with those reported on January 1st, 1931.

The record of Southern spindle increases by years has beeen:

1912	803,882
1913	435,300
1914	329,410
1915	340,886
1916	619,682
1917	546,168
1918	319,546
1919	425,844
1920	663,446
1921	298,328
1922	285,868
1923	730,812
1924	400,848
1925	530,396
1926	343,800
1927	565,500
1928	331,692

(*Continued on Page 50b*)

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MILL NEWS ITEMS

CONCORD, N. C.—Work of repairing and repainting 98 houses in the Hartsell Mill village is now in progress. New roofs are being put on several houses and the interior of each is being renovated.

HIGH POINT, N. C.—Adams-Millis Corporation and subsidiary for year ended December 31, 1930, report consolidated net profit of $906,035, after depreciation. Federal taxes, etc., equivalent, after preferred dividends, to $4.83 a share on 156,000 no par shares of common stock. This compares with net profit in 1929 of $909,329, or $4.82 a common share.

MAIDEN, N. C.—The Sherwood Mills, formerly the Liberty Spinning Mills, has begun operations after being closed down for some time. The mill was purchased by H. H. Heavner at the bankruptcy sale some time ago but has been more recently purchased by R. L. Sullivan, of Icard, and A. B. Icard, of Newberry, S. C., who have given the mill a thorough overhauling preparatory to starting operations.

ASHEVILLE, N. C.—Sidney Shreero, of New York City, president of the recently incorporated Asheville Weavers, Inc., is here arranging to lease quarters for the plant, which will manufacture men's and women's clothing goods for the wholesale trade. This concern was recently incorporated at Raleigh, N. C., with no par stock capital. Joseph Enwright, of Atlanta, Ga., is vice-president of the company. He expects to spend the major portion of his time in New York City in connection with the marketing of the products when operations have gotten under way.

GADSDEN, ALA.—The fifty-one dwellings which were constructed by the Southern Manufacturing Company on a lease sale contract, the old Sauquoit Company having the option to buy them within a certain time, have been purchased by the Standard-Coosa-Thatcher Company, which company purchased the Sauquoit Spinning Company in January, 1930. This company, when purchasing the local plant of Sauquoit Company at a cost of approximately $$1,000,000, decided to exercise this option and the announcement has just been made that the houses have been purchased.

AUGUSTA, GA.—Plans for the operation of the Augusta Factory, one of the oldest textile manufacturing establishments in the State, will be discussed by a committee of stockholders shortly. The instiuttion has faced difficulties for the past six months, threatening a suspension of operation. Cessation would throw about 600 operatives out of work, and it is hoped some plan of rehabilitation can be worked out.

MARBLE FALLS, TEX.—Certified Laboratories, Inc., which some time ago took over the assets of the Marble Falls Textile Mills Company, is making absorbent cotton and gauze for hospital use.

Col. G. H. Carter, of Marlin, is president of the company, which has installed a complete new plant at a cost of more than $250,000. It is planned later to manufacture adhesive tape and kindred lines from textiles for medical and hospital use.

MILL NEWS ITEMS

AUGUSTY, GA.—According to local newspaper reports, the American Atlas Corporation has been chartered here to establish a plant for the manufacture of rayon yarns and fabrics. The reports state that the company is backed by British capitalists who plan to expend more than a million dollars on the plant, which is to be located at Port Wentworth.

ALTAVISTA, VA.—The Altavista Textile Corporation has been chartered here by R. L. Cumnock, president, and others. It is understood to be the first step in the reorganization of the Altavista Cotton Mills, which have been in the hands of a creditors committee for some time. The mill has been closed for several months.

YORK, S. C.—Cannon Mills No. 3 is maintaining a full time operating schedule. The Travora Mill of the Neely-Travora Mills, Inc., which has been on a three-day operating schedule for some time, inaugurated a full time day operating schedule Monday, February 16, and not only maintained that schedule throughout the week, but was forced to operate some at night. The Neely plant of the same group, which also resumed a full time operating schedule last week, after being on a three-day per week schedule, will continue this schedule. The Lockmore Cotton Mills continue to operate this week on a full time schedule, after niaugurating and maintaining this schedule last week.

Manville-Jenckes Co. in Receivership

Providence, R. I.—The Manville-Jenckes Company, one of New England's largest textile operating plants, with mills in Rhode Island and Gastonia and High Shoals, N. C., was placed in the hands of temporary receivers under a petition granted in Superior Court here.

Liabilities amounting to $2,900,000 in outstanding demand notes for which creditors are pressing, were cited in the petition for receivership, which was sponsored by three stockholders as a reason for their action.

The company employs 6,500 operatives; about 4,000 in its Rhode Island plants at Pawtucket, Central Falls, Manville and Woonsocket, and 2,500 in its mill at Gastonia, N. C. It operates 5,770 looms and 25,646 spindles in this State and 1,274 looms and 15,547 spindles in North Carolina.

The petition for receivership was asked by Frederick L. Jenckes, Charles D. Owen and J. Richmond Fales, who hold a total of 4,091 shares of the company's preferred and 6,333 shares of common stock, according to the petition.

Presiding Justice Edward W. Blodgett named Zenas W. Bliss, State Tax Commissioner, and Dexter Stevens, president of the company, as temporary receivers and set their bond at $50,000 each. Hearing on the appointment of permanent receivers was set for March 17.

Frank H. Swan, counsel for the petitioning stockholders, stated that the purpose of the receivership was to insure the uninterrupted operation of the company pending the perfecting of plans for the reorganization of the company.

Under decree entered by Judge Blodgett, the receivers are authorized to operate the plants and conduct the business of the company.

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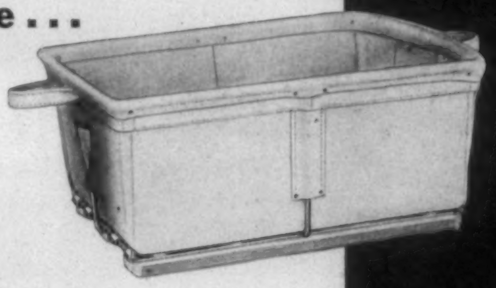

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Twenty Years' Development in Electrical Equipment

(*Continued from Page* 34)

conditions and accidents. Every time a motor fails in service there are two types of unavoidable cost. One of these is the cost of removing the motor from service, replacing it with another and getting the damaged motor repaired. The other cost and one which is frequently of even greater importance is the cost of the interrupted operation and lost production. With the new type of construction mentioned above, the damaged stator core may be very quickly pressed out of the frame and a new, complete and factory wound stator structure pressed in its place. This replacement can be made in a very short space of time thus putting motor again into serviceable condition. The cost of the new factory wound core is materially less than the average cost of having a damaged stator rewound in a repair shop.

The contingent loss or that incident to the stopping of the machines is also decreased by reason of this construction owing to the shortness of the time required to repair the damaged motor.

Another excellent example which has been particularly helpful in reducing maintenance cost is the sealed sleeve bearing. This bearing is built with the idea of keeping the lubricant in the bearing and the dirt out. Naturally this prolongs bearing life, reduces the frequency of inspection and oiling thereby saving labor and lubricant.

LOOM DRIVES

Twenty years ago the individual loom motor was just being introduced. Some of the installations made at that time resemble in a general way those which are now being installed but naturally the years have brought many improvements in application, motor construction and motor protection. The years of experience have shown conclusively that individual loom motors require unusual mechanical strength and a liberal rating if a motor is to break in a new loom without damage to itself. Another important step is the improved waste packed bearing construction which prevents surplus oil from reaching the inside of the motor. An oil soaked winding is one of the most frequent causes of winding failure therefore this feature results in decreased maintenance and longer life.

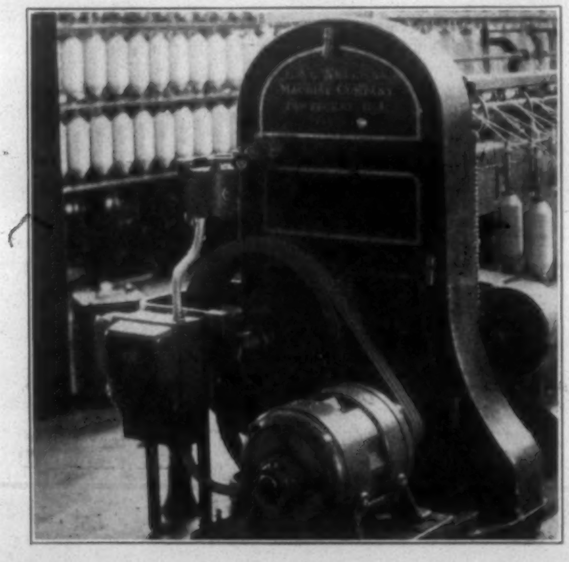

Fig. 3—A cog-belt drive on a roving frame—motor is controlled by a linestarter and master switch.

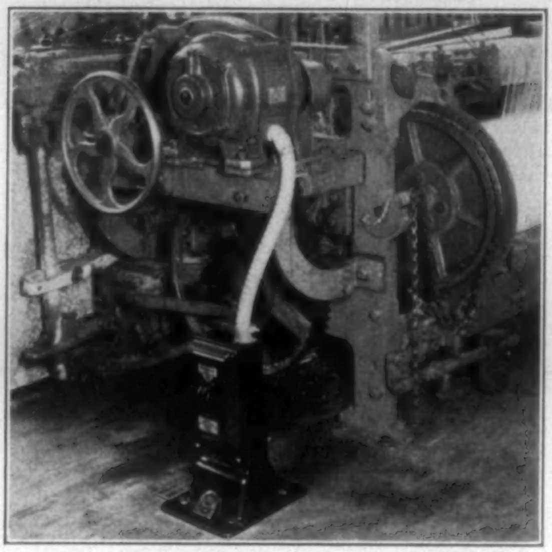

Fig. 4—A recent installation of an individual loom motor and control switch.

The earlier individual loom installations used snap switches for control and ordinary fuses for protection. The fuses were necessarily very much over size so that they would not burn during the starting period therefore they gave practically no overload protection to the motor. One of the very modern improvements is the introduction of a small compact loom motor control switch which will not trip out on starting or short overloads but which gives accurate protection if the overload persists a sufficient length of time to cause dangerous motor heating. Fig. 4 shows an installation of loom motor and switch recently made in a Southern mill.

The keynote of all types of business at the present time is lower cost and improved quality. In the above paragraphs are described a very few of the steps which have been taken by the electrical manufacturer during the past 20 years to assist cotton mills in reducing costs. The next few years will unquestionably see a very material change in the equipment and operation of cotton mills and these changes will be brought about by the close co-operation which exists between the mill operators, the manufacturers of textile machinery and those who supply the electrical equipment.

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Wardlaw Speaks to Students

J. T. Wardlaw of the Lockwood Greene Engineers, Inc., Spartanburg, S. C., spoke to the Clemson textile seniors on various problems in connection with the organization and construction of an up-to-date textile plant. Mr. Wardlaw in his talk discussed some recent developments in mill construction. The subject of light, moisture, temperature and power were taken up in a very instructive way.

Hosiery Mills Busy

NASHVILLE, TENN.—Walter Fred Hosiery Mills maintain full capacity schedule in spite of business conditions. This plant employs approximately 350 operatives and has a pay roll amounting to a half million dollars yearly. The company is featuring new finishes in hose. The dull finish silk hose, which was first introduced last fall, has proven very popular and is being shown this spring to the exclusion of other varieties. It is stated that these dull finish hose not only loo ktfcie as sheer as the old brilliant finish stockings, but they wear longer and the effect they produce is slenderizing.

Durene Has Fashion Revival

(*Continued from Page* 40)

the mercerizing industry was firmly established in Germany and England.

Looking back in 1930's advance in the United States—a period during which durene cotton has gone into active and spectator sports dresses, suits, undergarments, hats, and other accessories; into fabrics suitable for formal evening wear; into hosiery competitive with the best imported types; into shirtings, broadcloths, oxfords, novelty meshes, nets and jerseys—one can but wonder at the comparatively silent years since 1906 when little was said about this textile's place in the fashion world. During at least a considerable part of this period there was no widespread impulse among textile manufacturers to encourage styling; no broad effort to increase channels of usage.

In the mercerized cotton field this may be laid to two or three very logical reasons. For one thing by 1906 several important basic markets more or less automatically had become large consumers of mercerized cotton. Mills at that time were less likely to have the so-called mechanics of merchandising expansion. Today wise textile manufacturers do not work blindly on given orders, but go about the intelligent business of finding out what consumers really want, helping their present and potential customers—the fabric and ready-to-wear manufacturers—to meet these demands through yarns right from every standpoint—size, strength, beauty and so on. Certainly in 1906 merchandising methods had not yet arrived at the point where direct contact with consumers and their immediate sources of supply was understood to be useful in the sense industries now know it to be.

Probably one of the most important reasons that consumers are today attentive to wisely promoted textile developments—particularly in this field—is that there is a splendid timeliness in any absolute guarantee of quality. Moreover, the soft, low luster of durene cotton has an enormous fashion appeal. Women have tired of extremely lustrous surfaces. The trend is all toward delustering when low luster is not inherent. In durene it is inherent.

Then, too, there is today a very definite trend among the thousands of Americans who have become what, for

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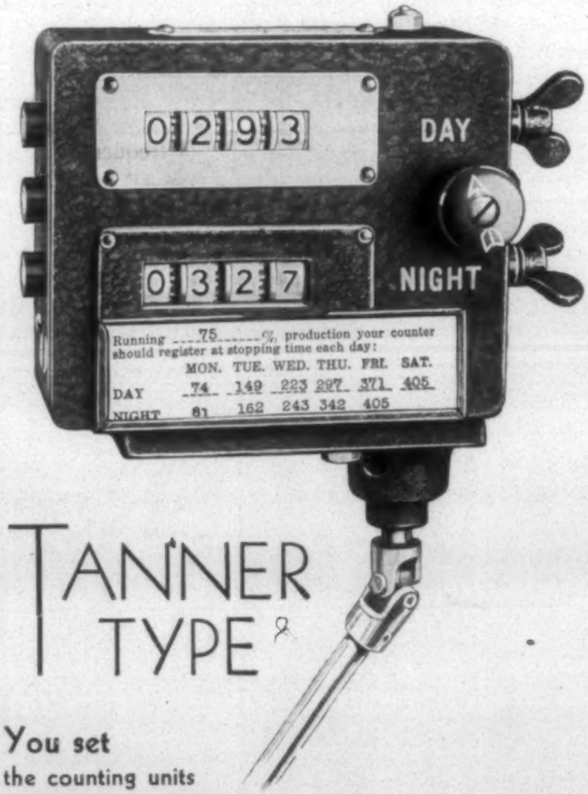
shows up lagging looms by continuous check-up of actual production . . . compared with standard.


0 2 9 3
DAY
0 3 2 7
NIGHT
Running 75 % production your counter should register at stopping time each day:
MON. TUE. WED. THU. FRI. SAT.
DAY 74 149 223 297 371 405
NIGHT 81 162 243 342 405

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You set the counting units to zero, so production registers from start of pay period only. Your weaver notes the *expected* production, posted in card holder on Counter. He sees where he stands on production—any minute. He governs his work to *get* the required total. ★ Counter *locks* against tampering. Re-setting counting units interchangeable with all existing Root type Pick Counters. Write for particulars or *free trial installation.*

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want of a better phrase, we call "fashion conscious." This trend is, in the final analysis, nothing more or less than good taste. The smart, unpretentious beauty of finely mercerized cotton in many types of clothing and many varieties of accessories is good taste. For example, silk stockings for sports are not smart. Durene stockings are.

When you combine beauty, utility, and good taste you have a story worth telling the ultimate consumer.

It is widely admitted that the education, styling and merchandising work of the Durene Association of America during the past year has brought the whole cotton industry many paces forward into national appreciation.

Rayon's Record

(*Continued from Page 32*)

American one had been formed in 1918 and had turned from making water proofing for aeroplane fabric to the spinning of artificial silk. There were several difficulties at first to be overcome with this type of yarn. It would not take eitheir a direct cotton dye, or a silk acid dye, but the British company developed a special range of dyes which in turn would not affect cotton or silk. This solution of a difficulty led to the development of cross dyeing with this yarn in combination with others, and thus the yarn's greatest fault became its most valuable feature. The yarn was found to have other properties not shared with the other types of artificial silk and the American company started right in to perform the necessary pioneer work to introduce the yarn quantity into textiles of this country. At first it went almost entirely into fancy half hose, for cross dyeing of two and three color effects. As the manufacturing methods were perfected the yarn was found to have a very soft hand and it was introduced alone into dress goods and linings. When the dyers around the country became familiar with the dyeing of this yarn it was used more in quantity and production had to be increased. In 1927 the company changed its name to Celanese Corporation of America. Today it has a production of about 7,000,000 pounds.

NEW FIBER IS NAMED

In 1924 a great step was taken in the popularizing of artificial silk. Up to that time the yarn had been known variously as art silk, fibre silk, and just fibre, but in that year a committee gathered in New York and named the still comparatively young member of the textile family. Tremendous interest was shown and names were sent in from all over the country. Finally "Rayon" was the word chosen to designate the yarn, and it was soon adopted by the entire trade. At once there appeared signs of more people becoming acquainted with the yarn, and it was more readily accepted in fabrics and garments by shoppers.

FOURTH MANUFACTURING PROCESS

There were now three methods of making rayon employed in this country. On June 14, 1925, the fourth made its debut in the United States. On that date the American Bemberg Company was incorporated, sponsored by J. P. Bemberg A -G. Barmen, Germany, to manufacture rayon by the cuprammonium process. A plant was built that year near Elizabethton, Tenn., and within two years it was producing two and a half million pounds. This yarn also has properties that make it distinctive. By this process filaments can be spun finer than by the others and consequently Bemberg specializes in the finer sizes.

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On August 25, the Amoskeag Manufacturing Company, the largest cotton mill in the world went in the rayon business to make its own yarn. At first it was planned to use all the rayon produced, but in order to produce it economically, the unit had to be larger than the company's own requirements. Consequently, this yarn is sold on the market to some extent. The capacity today is about 800,000 pounds.

Less than a month after Amoskeag, the Skenandoa Cotton Company, Utica, N. Y., incorporated the Skenandoa Rayon Corporation on September 17, 1925. It now has a capacity of nearly 2,000,000 pounds.

This example was followed also by Manville Jenckes Company who built a rayon plant at Woonsocket, R. I. to feed their own looms. The venture was not entirely successful, and the rayon unit was sold and incorporated as the Woonsocket Rayon Company. It has a capacity of a million and a quarter pounds.

The Hampton Company, Northampton, Mass., was another cotton mill to follow Amoskeag's example and for several years it has sold a small amount of rayon in the market.

All four of these projects use the viscose process.

While this group of cotton mills was entering the rayon manufacturing business the Delaware Rayon Company appeared in 1926. The following year the company bought a building from the Bethlehem Steel Company at New Castle, Del., which had been used for war material, and commenced the manufacture of rayon by the viscose process. Today the company has a capacity of about two million pounds. This company also recently started the New Bedford Rayon Company which has a capacity of one and a quarter million pounds of viscose type of yarn.

In 1927 the American Glanzstoff Corporation was formed and a plant soon grew up neighboring its sister plant of the Bemberg Corporation. This new company founded by Vereinighte Glanzstoff-Eabriken A. -G. Eberfield, Germany, was built to produce rayon by the viscose system. Today it has a capacity of over seven million pounds.

The following year, in May 1928, the American Enka Corporation was announced sponsored by N. V. Nederlandsahe Kunstzijdefabrick "Enka". A plant for the manufacture of viscose rayon was built near Asheville, N. C., and today it has a capacity of about four mililon pounds.

Many other companies have experimented with making rayon and several have entered the field, but owing to initial difficulties they have dropped out or have not been able to grow to any appreciable size.

Thus we find that in the second half of the period in which rayon has been made in this country, sixteen new plants appeared and erached a point of commercial success so that they are operating today. This decade has seen the country's production increase from 10,250,000 pounds in 1920 to 123,00,000 pounds in 1929, an increase in nine years of over 1200 per cent.

Nineteen-thirty did not live up to this picture as it was the only year since the war that production was curtailed. However the rayon industry went through a very necessary and inevitable period of evolution during that year of general business depression. Today there seems to be every indication that 1931 will be back on a par with 1929. Confidence has been restored throughout the trade and yarn manufacturers, in spite of stocks at the first of the year, are already short on certain favorite numbers.

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Sales Representatives for Franklin Rayon Corporation

New Spring Cottons Shown

With a meeting in Gastonia last Friday, a collection of twenty spring fashions woven or knitted of durene cotton have made their 99th appearance in the State of North Carolina since January 1st Mrs. W. D. Anderson, prominent club worker, reports. Mrs. Anderson has been speaking throughout the State in behalf of the "Wear Cotton" movement. She has appeared before merchants groups, parent-teachers associations, women's clubs and home economics meetings. Each of Mrs. Anderson's talks has been followed by a parade of local young women in durene cotton fashions. Ninety-nine of these meetings have been held.

Among the manufacturers represented in this fashion collection were: Watkins Hosiery Mills, Belle Meade Hosiery Mills, Jacob H. Blaetz, Infants Socks, Inc., J. W. Landerberger & Co., Oneita Knitting Mills, Viola Silk Mills, Globe Knitting Works, Galey & Lord, I. A. Wyner & Co., Albert H. Vandam Co., Robert Turk, Inc., Nudelman & Conti, and Nanty Frocks, Inc.

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GILL LEATHER CO.
SALEM, MASS.

The Old-Timers Speak

(*Continued from Page 34b*)

way to the small one and two-room school houses of thirty years ago.

Yet you will hear people wishing for a return to "the good old days," but I do not believe any of us would wish to return to the operating and living conditions of thirty years ago.—*T. W. Mullen, Superintendent, Rosemary Mfg. Co., Roanoke Rapids, N. C.*

I have been connected with the cotton spinning business all my life, and my father and associates before me were also weaving blankets and plaids. They built the Woodlawn Mills (Pin Hook) in 1848. I think, however, it took them more than a year to build it, having to get their lumber from the stump and saw it, build their own water wheels, make their brick, build dams, etc., which made it a decidedly bigger job to build and start a mill then than it does now.

I have seen many changes in machinery, in labor conditions, in marketing product, some for the better and some for the worse, I think, but I never write anything for publication and will ask you to excuse me at this time, but am quite sure your number will be interesting and I am sending today my subscription for your paper. We have been getting it here in the office which I see occasionally but want a copy of my own on my desk all the time.

You have done a great deal for the industry and your labor stand is splendid and I hope you will not change but that you will continue to fight and advise against labor agitators. With best wishes, I remain.—*A. C. Lineberger, Head of the Lineberger-Stowe Group of Mills, Belmont, N. C.*

I want to tell your young readers just a few things I have done and seen in the cotton mills in the last forty years, "believe it or not."

I have taken a torch, gone through the card room of a cotton mill lighting gas jets. Sometimes if I happened to open the gas jet a little too wide, the flame would flare to the ceiling but I have never set a mill afire.

I have worked in a mill that had pickers fed by hand, one man placing the cotton evenly on an apron so that the laps would be as even as possible. The evenness of the lap depended on the accuracy with which the hand feeder laid the cotton on the apron. The cards had the clothing put on in strips running crosswise the card. The flats were made of wood. The sliver leaving the card was conveyed in a wooden trough to a railway head. The speeders were single fly, that is, each speeder had one row of single flyers instead of a double row.

I have worked in a cotton mill at Lowell, Mass., for 70 cents a day. My job was laying up one box of roving every five minutes during the day, sweeping the floor and keeping the water barrels full of water. In sixty days the bottoms of my feet were covered with corns.

I have seen doffers work for 1 cent an hour and not earn their pay. When they doffed spinning frames, from 15 to 50 per cent of the ends would come down I would not have a doffer in my mill today if he couldn't stop, doff and start a spinning frame without an end coming down. I don't use anyone except grown men.

I have seen speeder hands work for $3.50 per week, drawing frame hands work for $2.40 per week and good weavers for 75 cents per day. I saw John Mason, one of the best mill men in the South, running the carding and spinning of the Statesville Cotton Mills for $1.50 per day. I superintended Moore Mill at Taylorsville, doing my own fixing in the spinning room and card room and also the chores of general mechanic, for $20 per month and my board.

This will give you some idea as to how much advancement has been made in the textile industry during the last thirty or forty years both in machinery and management.—*Pascal S. Boyd, Vice-President and General Manager, Mooresville Cotton Mills, Mooresville, N. C.*

To End Night Work For Women and Minors

AN overwhelming majority or 83 per cent of the cotton textile industry of the United States, will conform to the recommendation submitted by the Cotton-Textile Institute to the cotton mills last October that night employment of women and minors be discontinued. This majority represents over 26,000,000 spindles including 79 per cent of the spindleage in night running mills.

In reporting the final results of the five months' educational effort concerning this recommendation, Walker D. Hines, chairman of the board, and George A. Sloan, president, of the Cotton-Textile Institute, stated:

"We announce the necessary conformity to the elimination of night work for women and minors in cotton mills and therefore, that the plan for such elimination becomes effective. The industry is to be heartily congratulated on the conclusive support it has given to this great reform."

In various well-defined groups it has been understood that the group percentages would also be taken into consideration. The extent of conformity is not less than 75 per cent for such groups and for the night running mills therein and in most instances this minimum percentage has been largely exceeded.

The question of this reform has been agitated for years within the industry but received its greatest impetus within the last year or two. In the fall of 1928 an effort was made to amend the by-laws of the Cotton-Textile Institute by removing the restriction on its taking any part in legislative or political matters so that it could take the initiative in the effort to accomplish this reform through legislation. But the membership preferred to retain the prohibition on the Institute's taking any part respecting legislative matters. In the early part of 1930, however, the plan for the Institute to propose voluntary action took definite shape following a conference with government officials at Washington. The first outcome of this conference was the suggestion of leading mill executives to the industry to establish greater uniformity in running time for labor and machinery and to make the night shift shorter than the day shift and very important progress was made in securing these results.

Last summer there developed an increased conviction that night employment of women and minors ought to be entirely eliminated, and this paved the way for the present development.

The Institute's recommendation provided for the initiation of the movement upon obtaining the support of 75 per cent of the spindles, including a corresponding percentage of the night runners. Thus it will be seen that the results announced are well "over the top" at the outset.

On account of lack of space in this issue, it was not possible to include the complete list who have signed the declaration of policy in regard to the night work of women and minors. The list will be published next week.

Our Annual Review

(*Continued from Page 43*)

1929	419,790
1930	150,688

The 1930 spindle increase by States was as follows:

SPINDLE INCREASE BY STATES

Alabama	10,716
Georgia	93,484
North Carolina	30,684
South Carolina	11,056
Tennessee	2,500
Texas	2,248
Total	150,688

We have usually compiled a "Spindles on Order" list as of January 1st, but this year we could find no spindles on order except those to replace old spindles.

It is also remarkable that our records for 1930 do not show a single new cotton mill built, in the South, during the year.

The number of additional looms installed in the South during 1930, including silk and rayon looms, was 3,078 as compared to 12,832 in 1929 and 9,251 in 1930.

The increase by States was:

LOOM INCREASE BY STATES

Alabama	231
Georgia	602
North Carolina	1,597
South Carolina	246
Tennessee	150
Texas	30
Virginia	222
Total	3,078

In increase in knitting machines during 1930 the South has made a better showing than in spindles and looms, but the total of 2,502 is far less than the 6,441 machines added during 1929.

The increase in knitting machines during 1930 by States has been as follows:

KNITTING MACHINES INCREASE BY STATES

Alabama	135
Georgia	317
Louisiana	3
Mississippi	94
North Carolina	1,493
South Carolina	104
Tennessee	278
Virginia	78
Total	2,503

More Than 20,000,000 Pounds of Rayon Used Annually By North Carolina Mills

The mills of North Carolina consume annually approximately 21,903,000 pounds of rayon, according to an estiby William Barnhardt. Mr. Barnhardt is a member of the firm of Barnhardt Bros., of Charlotte, distributors of rayon, silk and cotton yarns.

The figures obtained by Mr. Barnhardt were obtained from individual mills and are therefore regarded as an accurate estimate.

In the tabulations below, he shows the rayon consumption by the mills in the various towns in the State. So far as is known, that is the first time that such figures have been published and they are sure to be received with unusual interest.

Mr. Barnhardt's estimate follows:

TOTAL ANNUAL RAYON CONSUMPTION IN NORTH CAROLINA BY TOWNS

	Pounds
Burlington, Durham and Gibsonville	7,737,000
Salisbury, Concord and Albemarle	550,000
Asheboro and Liberty	509,000
High Point, Thomasville and Lexington	2,732,000
Winston-Salem, North Wilkesboro and Kernersville	1,595,000
Charlotte, Belmont, Lowell, Kings Mountain, Shelby, Red Springs, Spindale, East Flat Rock, Hendersonville, Glen Alpine, Black Mountain, Marion, Morganton, Drexel, Newton, Valdese, Hildebran, Hickory and Statesville	8,780,000
Total	21,903,000

In a statement accompanying the figures, Mr. Barnhardt says:

"These figures are based on the average consumption of the various mills when they are operating at normal capacity, based on the assumption that the mills run 50 weeks in the year.

"These figures were obtained from each mill individually and should therefore, be fairly accurate.

"This is not a complete list as I have not gotten the consumption data from a few mills such as Cramerton Mills, Inc., etc. However, I believe that at least 90 per cent of the consumption in North Carolina is included in the above total."

Gastonia Has Cotton Festival

Gastonia, N. C. — Climaxing an intensive "Wear Cotton" campaign inaugurated here several months ago, to stimulate the use of all kinds of cotton goods, there was held here a Cotton Festival, perhaps the most unique of its kind ever staged in the South. Thousands of people from the Piedmont Carolinas came to witness a style show which consisted of a most elaborate display of the latest and most fashionable women's garments, modeled by more than seventy beautiful Southern girls who acted as mannikins for the merchants and manufacturers.

Special features of the style show were addresses made by Dr. W. H. Frazer, D.D., L.L.D., a native of Alabama, but at present the president of Queens-Chicora College, Charlotte, N. C., and David R. Coker, L.L.D., Ph.D., of Hartsville, S. C., who is known over the entire South as having done more to help the farmer than any living man or organization.

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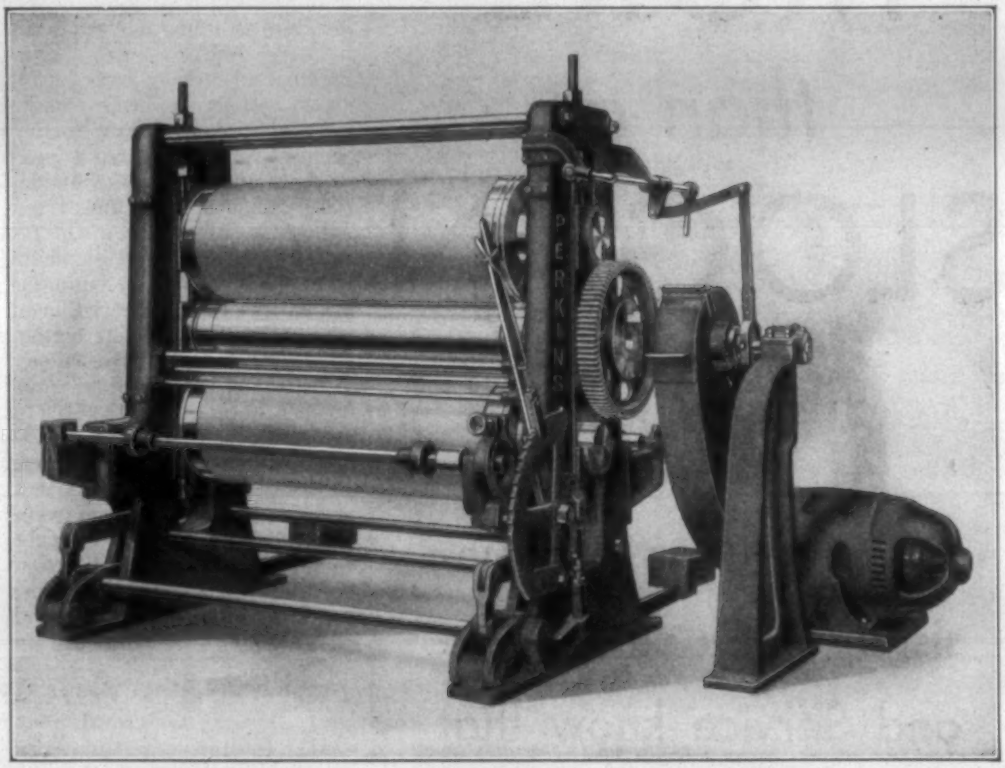

Perkins Silk Finishing Calender has all the strong characteristics of Perkins design. It is rugged, flexible, in fact a perfectly balanced machine in every way.

It is equal in all respects to the high standard of quality in the various calenders bearing the Perkins trade mark.

Photograph shows Perkins Silk Finishing Calender direct connected thru silent chain drive. This Calender is also furnished with friction clutch pulley drive.

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Southern Representative: Fred H. White, Independence Bldg., Charlotte, N. C.

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- Dyeing Machines
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- Ranges
- Scutchers
- Singers
- Squeezers
- Tenters
- Washers
- Winders

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Ask Hunter."***

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MANUFACTURING & COMMISSION CO.
58 and 60 Worth Street, New York

New Uses and New Opportunities For Cotton

(*Continued from Page 26*)

one especially encouraging feature observed is the fact that the growing appreciation of the advantages of cotton bags is not confined to any one section of the country.

DRESS FABRICS

In terms of immediately measurable results, late developments of a favorable character in the realm of fashion have an important significance to that section of our industry, producing dress fabrics. While the Institute's national advertising and education campaign in behalf of styled cottons has been remarkably successful in revealing their unique charms to the American public during the past two years, a new gauge of the fruitfulness of this work is afforded in the unqualified recognition by the Paris dressmakers in their recent spring openings of the importance of cottons in the fashions for 1931. American stylists and retail merchandise executives returning from Paris radiate an enthusiasm for cottons that well emphasizes their appreciation of the profitable opportunity at hand to promote cotton as having the appeal of combining fashion and economy in dress.

Surveying the Institute's experiences in market development work during the past year and having in mind the numerous continuing studies and projects now having attention but not mentioned here, there is new and ample justification for the conviction that our industry's products can be made to serve an ever widening range of purposes despite the increasingly keen competition encountered in numerous directions. With the helpful cooperation in sight on many sides this phase of the Institute's activities has a new and greater opportunity to demonstrate its usefulness to the industry.

"The First 20 Years Are the Hardest"

(Continued from Page 36)

Most of these first advertisers have used our pages steadily since the first issue and thir continued support and friendship has been a source of much gratification to us.

In the 20 years that the Southern Textile Bulletin has been published, the textile industry has "gone places and done things." It has undergone a great many revolutionary changes. Right now, after a lapse from profit-making it appears all set for a new era of prosperity.

As we enter our 21st year, almost old enough to vote and everything, we venture just one prediction. The changes in the next 20 years in textiles are going to make the past 20 years look like nothing at all. The men and mills that meet the changes that passing yearsdem and are going to cash in on their ability. Those who do not will stand on the sidewalk and watch the parade go by.

Communist Member Expelled for Opposing Negroes

New York. — The first communist trial held in the United States resulted in the expulsion recently of August Yonkinen, Finnish janitor, from the communist party for alleged race discrimination against negroes.

He was convicted of "what Chauvinism." Yonkinen was charged with objecting to having negroes bathe in the Finnish Educational Workers club, of which he was janitor, and with failure to protest at expulsion of negroes attending a dance at the club.

A jury of 14 reached its verdict in 33 minutes. Two thousand persons heard the verdict read.

We Extend Our Heartiest Congratulations to

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Then and Now

(*Continued from Page* 19)

69 hours per week and the pay of what we call common labor was 60c per day.

I have had not contact with cotton manufacturing since my connection with the finishing industry for the past twenty-six years. Surrounded as we are now by cotton mills, we conform pretty closely to cotton mill conditions. We operate 55 hours per week and pay common labor 20c per hour.

In connection with the building work at Reidsville in 1895 I recall with some interest the fact that there was no such thing in existence as car service or demurrage. We had at that plant a particularly long side track and it was no uncommon thing to have a dozen or more cars on that side track for several weeks at a time, loaded with building material which we were not required to unload until we were ready to use it. How the railroads could make a living under such conditions was something for them to figure out, and of course they could not at all in proportion to any such loss of revenue.—*Jno. W. Arrington, President, Union Bleachery, Greenville, S. C.*

Let me congratulate you on this the Twentieth Anniversary of the Southern Textile Bulletin. You have been putting out a paper for the past 20 years that have been a great help to the textile industry, especially the superintendents. I have been reading the Bulletin since it was started and it has been a great help to me in many ways. I have always found it on the right side of all moral questions and other questions that have come up.

I am not a writer, but I have been in the cotton mill since I was eight years old. When I begin to tell the young superintendents what I have gone through in past years and how cotton mills were run when I was a boy they will say that happened before the Civil War. But I want to tell you before I start I am a young man and if you don't believe it just come over and see me.

When I was put in the mill at eight I carried quills from the weave room up a flight of steps to the spinning room for 10c per day—12 hours, or 72 hours per week. The power used then was an old overshot waterwheel. The mill consisted of one willow to open up the cotton that was dropped through a hole in the floor to the lapper. The lapper hand was paid 60c per day. He would take this cotton from the willow, weigh it and spread it on an apron which had a white slat every 3 feet that was the evener in those days.

The laps were taken to the cards. Now these cards were made of wood. I mean the flat, cylinders and doffers. You can imagine what would happen to these cards when it rained. They just swelled up and stopped until the grinder could get around and reset them. There was a railway head and a long trough to convey the roll to the railway head; no evener on the railway head. The roll was delivered into a tin roving can and was packed down with a big plunger which ran like a pile driver. The cards were stripped out every two hours by hand; I mean the cylinders and doffers, but the flats were stripped every half hour by hand.

Next were the drawings. I will not try to explain them but the thing I look back over with wonder was the old list speeder. I wish I could explain that to you, but I was just a kid. I don't remember just how it worked, only it filled 20 bobbins to one doff. They ran in a horizontal

(*Continued on Page* 62)

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Stevens Mills

In Cloth it's
Style*
In Winding it's Bobbins Tied in
that
Count

More bobbins can be tied in on an **ABBOTT WINDER** at a lower price than on any other machine.

The steady flow of work past the operative on an **ABBOTT WINDER** secures not only high individual records, but the average of a group is geared to the standard of the machine. Even the poorest operative is stimulated and the group average raised.

We can show consistent records covering the entire winding range.

A survey will allow us to present a definite proposal for your consideration.

ABBOTT MACHINE CO.

WILTON, N. H.

---

* With apologies to "Chesterfields."

Better Business in Cotton Textiles

"Evidence continues to pile up that a permanent improvement has manifested itself in the cotton textile industry. The time has passed when cotton goods can be had on a write-your-own-ticket basis," says a statement by the Cotton Textile Merchants Association of New York.

"Buyers have been following a practice instituted some time ago of supplying their needs on a hand-to-mouth basis. For some months past, when prices were registering new lows all along the line, they could hardly be blamed for wishing to avoid being caught with even a small stock on declining markets. In spite of optimtistic opinions of worried manufacturers that prices would surely be stabilized at reasonable figures, the decline continued.

"Now, however, that situation has been reversed. The foundation for this change was laid in the summer of 1930, but it has only manifested itself within the past few weeks. It has been said that cotton textiles present at this time the strongest front of any major industry. The statement that they will take the lead in recovering from the current depression is based, not oupon the enthusiasm of proponents, but on sound facts backed by statistics covering production, sales, shipments, stocks and unfilled orders.

"Some evidence has been adduced tending to prove that other industries have taken effective steps to curb ruinous overproduction, but cotton mill men generally have set an example of rigorous self-discipline in limiting production to demand which has not be equalled by other manufacturers.

"Briefly summarized the conditions which have added strength to the cotton textile industry are these: increased efficiency in manufacturing methods; lower production costs to meet the changed economic and competitive conditions; production brought into line with demand; and finally, a thorough liquidation of stocks.

"Of course decreased costs, no matter how skillfully achieved, would be ineffective if lack of demand brought about pyramiding of stocks. Sales, however, have increased satisfactorily. As a result prices in practically all groups are noticeably firmer. Sales during January were 118 per cent of production, while stocks on hand showed a sharp decrease.

"The reports so far received covering sales in February tell an encouraging story of continued activity. Several of the largest houses in Worth Street have stated in their market letters that sales for the current year are the largest reported in any similar period and far in excess of actual production. These reports cover both gray and colored goods and there has been similar activity in fine and fancy goods. It seems somewhat of a paradox to speak of depressed conditions when recent reports are colored by such statements as these.

"These reports and information secured from other sources indicate that the February report of the Association will show total stocks ranging between 300,000,000 and 325,000,000 yards. It is doubtful whether they will ever go much lower as they are now close to the minimum. In addition to this drastic reduction, unfilled orders will probably exceed stocks at the end of February. Already in many constructions spot deliveries are unobtainable.

Union Bleachery

Greenville, S. C.

Extends Heartiest Congratulations

to

Southern Textile Bulletin

on this 20th Anniversary, and takes this opportunity to express publicly its appreciation of the invaluable service this journal has rendered during these two decades to the SOUTHERN TEXTILE INDUSTRY.

"May You Live Long and Prosper!"

Bird's Eye View of N. C. Finishing Co. Plant on Yadkin River

Bleaching—Mercerizing—Dyeing—Finishing

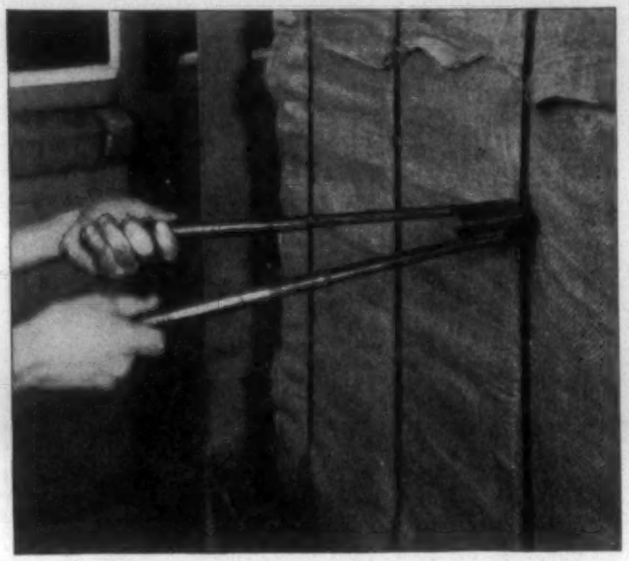
—of—

Wide and Narrow Cotton Fabrics

North Carolina Finishing Company

Salisbury, N. C.

Sewing Department, N. C. Finishing Company



Are you still wasting 6 feet of ties per bale?

IF you are using the old method of tying your bales with buckles you are wasting from 6 to 9 inches of tie on each side of the buckle. To prevent slipping of ties it is necessary to turn under that much.

Figure it out yourself—it means from 6 feet to 9 feet on every bale.

The Stanley *"Eversafe"* Baling System prevents this waste. All that you need is a lap-over sufficient to take the Seal. The saving on ties alone amounts to a big sum when many bales are packed.

Also, remember the new Stanley D. S. Seals cost much less than buckles and by actual test make stronger joints.

Eversafe - Round Safety Edges and Ends

We shall be glad to tell you about this worthwhile improvement in baling systems.

THE STANLEY WORKS
New Britain, Conn.

Atlanta Office:
The Stanley Works Sales Co.
731 Glen St., S. W. Atlanta, Ga.

Carolinas Representative:
Horace E. Black
P. O. Box 424 Charlotte, N. C.

Stanley "Eversafe" Bale Ties and Seals

Birthday Greetings

(*Continued from Page* 22)

greatly upon your vigorous personality and the willingness and the courage to do things right or to see that things have been done right.

Then again if you had not had the courage to fight for yourself up the ladder you would not now have the courage to fight for a recovery of the textile industry in the South.

Oftentimes I have marvelled at your lashing out but then you know your own ship of state best and the way in which you and your publication are held in high esteem tells the story.

In conclusion, permit me to wish you a full measure of prosperity in the future; that the high esteem and respect with which you are now held will continue to the end of your days. Meantime, may you grow old gracefully down the corridor of time.—*J. N. Paradis, Editor, Fibre & Fabric, Cambridge, Mass.*

I want to congratulate you and the Bulletin on your Twentieth Anniversary. I have been a reader ever since the first copy was printed, and can truthfully say that I have appreciated the Bulletin more than any magazine that comes to my desk. I enjoy its editorials. You are always fair to both alike the employer and employees. I honor the man who has convictions, and then has the manhood to stand for them as you do.

My how time flies, it seems only yesterday since Mr. Clark walked into the card room at Ware Shoals, S. C., and told me that he was going to publish a new textile paper, and wanted me to subscribe. I did so, am still a subscriber.

Here is hoping that you will have many more years of service the same kind you have been giving. With best wishes, I am—*A. F. Briggs.*

I have been a subscriber since the first issue of the Southern Textile Bulletin in March, 1911.

And I want to tell you that I admire your policies and editorials; they have been well said and to the point and without fear to any one.

I also want to congratulate you on your Practical Discussion Page by Practical Men.

I must say that this page has meant a great deal to me.

Wishing you many more candle in your next celebration.—*R. H. Armfield, Assistant Superintendent, White Oak Cotton Mills, Greensboro, N. C.*

I wish to extend my hearty congratulations and best wishes for you and your publication on the Twentieth Anniversary of the establishment of the Southern Textile Bulletin.

(*Continued on Page* 66)

Trouble in the Spinning Department?

Maybe it lies in faulty travelers. Easy to check up. Simply send for your FREE trial assortment of Victors, and try them out. They're made for good results. . . with all the skill and care humanly possible. State sizes and styles you want to try.

VICTOR RING TRAVELER COMPANY
20 Mathewson St. Providence, R. I.
Southern Agent, A. B. CARTER
Room 615, Third Nat. Bank Bldg., Gastonia, N. C.
Southern Representatives
A. Dewey Carter .... Gastonia, N. C.
N. H. Thomas .... Gastonia, N. C.
B. F. Barnes, Jr., 520 Angier Ave., N. E. .... Atlanta, Ga.

History and Development of the Synthetic Yarn Industry

(*Continued from Page* 31)

4. Filtration and deaeration, wherein the insoluble materials and air bubbles are removed from the cellulose solution.

5. Actual spinning of the cellulose solution to form the untwisted filaments.

6. Collecting and twisting the individual filaments together to form the yarn.

7. The removal of impurities and other undesirable chemicals from the yarn. (In all processes except the acetate process.)

8. Washing, bleaching, souring, soaping or oiling, drying, inspecting and winding, usually called the finishing processes.

AMERICAN HISTORY AND STATISTICS

Synthetic yarn was first made in America about 1911, twenty years ago, and the industry has grown by leaps and bounds, until at the present time the thirty American plants produce almost as much yarn as the next three largest producing countries (England, Italy and Germany) combined. Our consumption is also just about as great as that of these three countries combined. In the last four years, the American production and consumption of the synthetic yarns has doubled.

Of the thirty American producing plants, only about half are located in the South, that is, south of the Mason and Dixon line, but these Southern plants manufacture fully two-thirds of the American synthetic yarn production. Very probably the consumption of synthetic yarns in the textile industry is divided in about the same way, that is, about two-thirds of the yarn is consumed in Southern textile plants.

The improvements in the quality of the synthetic yarns have been just as great as the increase in quantity of production. A few years ago, I had the pleasure of discussing the early experiments in the commercial development of Chardonnet's Artiseta with the late Prof. Dr. Emil Bronnert, who was associated with Chardonnet in some of the earliest work upon the nitrate process. Professor Bronnert pointed out that for years Chardonnet was unable to produce even two lots of five pounds each of uniform nitrate yarn. This early yarn was so weak, especially when wet, that it was difficult to dye it, even in the laboratory, without the skeins falling apart in the dye bath.

Today the tensile strength of the yarns has been improved to the point where some of the best products rival the natural fibers in strength, and it is possible, by sacrificing certain other properties, such as elasticity and softness, to manufacture a synthetic yarn with a tensile strength surpassing that of the natural fibers. All of these improvements in quality have been made concurrently with very drastic reductions in price.

PRICE CHANGES

Only five years ago, during the first six months of 1926, first quality, 150 denier viscose yarn was selling for $2.00 a pound. In July, 1926, the price of this yarn dropped to $1.65 a pound, and in November of the same year to $1.45 a pound. In March, 1927, the price of 150 denier yarn was increased to $1.50 a pound, but in February, 1928, the price again dropped to $1.30. In June, 1929, this price went to $1.15, where it remained until July, 1930, when it was reduced to $0.95, and in January, 1931, the price of first quality, 150 denier, 40-filament viscose rayon was cut to $0.75 a pound. This tremendous decrease in price, 62.5 per cent in five years, together with the concurrent remarkable improvements in

BETTER THAN DAYLIGHT

where WOULD *you go to thread a needle?*

In an exaggerated circumstance—say, when you thread a needle—you recognize instantly the importance of both the adequacy and the direction of light. And just so does light play its part in your industrial plant.

Poor lighting annually exacts a tremendous toll from American industry. It is responsible for a high percentage of the "seconds" turned out in every plant. It is the direct cause of innumerable mistakes all along the production line, wasting materials, wasting time, wasting profits.

Exact figures on the number and value of rejects, seconds and other losses caused directly and indirectly by inadequate and improper lighting are, of course, most difficult to obtain. But this much can be said:

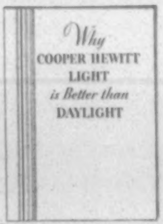
Only 15 per cent of America's industrial plants are adequately and properly lighted. In these, accidents are comparatively few, seconds run low and production is high.

Only 29 per cent can be said to be "fairly well lighted." In these, accidents are more common, the percentage of seconds runs higher and production is lower.

The remaining 56 per cent of all industrial plants are classed as poorly lighted. And in these, investigation has shown, the accident rate is high, the percentage of seconds is high and production is lowest.

Cooper Hewitt mercury-vapor light is *the* light that "gets the industrial needle threaded." Many of the reasons are explained in the new booklet, "Why Cooper Hewitt Light is Better than Daylight." Free for the asking. Address: General Electric Vapor Lamp Co., 855 Adams St., Hoboken, N. J.

419A G. E. V. L. Co. 1931



JOIN US in the General Electric Hour broadcast every Saturday evening on a nation-wide N. B. C. network.

GENERAL ELECTRIC
VAPOR LAMP COMPANY

the strength and other properties of the yarns, has probably not been equalled in any other industry.

Chardonnet's first synthetic yarn consisted of a single coarse filament, much like our present artificial horse hair. Natural silk, on the other hand, consists of many filaments twisted together, and Lehner, once a collaborator of Chardonnet, but later a competitor, was the first to produce a multifilament yarn, consisting of three filaments twisted together. Of course this three-filament yarn was softer and more nearly resembled natural silk in appearance and properties than the original monofil yarn, but it was only the first step in the development of our present multifilament yarns.

FINER FILAMENTS AND IMPROVED LUSTER

Only a few years ago, the best of the ordinary 150 denier yarn contained only 25 filaments. Today the standard 150 denier viscose yarn has 40 filaments; and 90 filaments, 150 denier yarn is on the market. One synthetic yarn with filaments almost two and one-half times finer than those of natural silk is available commercially. It requires 4227.5 miles of one of these single filaments to weigh a pound, and much finer filament yarns have been produced experimentally.

The early so-called "artificial silks" had a hard, harsh, glass-like gloss or luster which was at first not considered objectionable. But styles change and after Celanese was developed with a soft and subdued luster, which could be further reduced at will, the luster of the synthetic yarns was reduced, so that now almost all of the synthetic yarns are available in several degrees of luster. The luster and appearance of Celanese so nearly approaches that of natural silk that it is usually impossible to distinguish between them without a special test.

It was at one time almost impossible to dye rayon piece goods a level shade and even yet this difficulty has not been entirely eliminated, but the present American yarn is certainly far superior in this respect to that of some years ago. At the same time, many special dyestuffs for rayon are now available, we understand the dyeing of rayon better, and are able to select the dyestuffs most suitable for use on this material, so that much less difficulty is encountered in dyeing it than formerly. On the other hand, the best grade of acetate silk dyes quite evenly and, although most of this material was at one time yarn dyed, most of this material is now also dyed in the piece.

AMERICAN YARNS BEST

Without any doubt whatsoever, the bulk of the Amtrican synthetic yarns, and the materials made from them, are far superior to the European synthetic yarn products. Thsi is probably at least partly due to the fact that the American public has more money to spend, pays more money for its clothes, and gets better materials and clothes, than any other group in the world. The price received largely governs the quality of the merchandise available, and this gives the American manufacturer a tremendous advantage over his foreign competitor. In no other country are the fine filament yarns as widely used as in America.

In no other country in the world are the colors of the majority of the dyed and printed goods as fast as in America. This applies to cotton, wool, and silk, as well as the synthetic yarns. In the case of the regenerated cellulose yarns and cotton this is due to the rapidly growing use of the vat dyes and AS naphthols, both of which are more expensive, and more difficult to apply, than the less fast colors.

In the design of our fabrics, prints, etc., America in no way lags behind the manufacturers abroad. It is true

(*Continued on Page* 64)

"COLUMBUS"
Spinning and Twister
TAPES

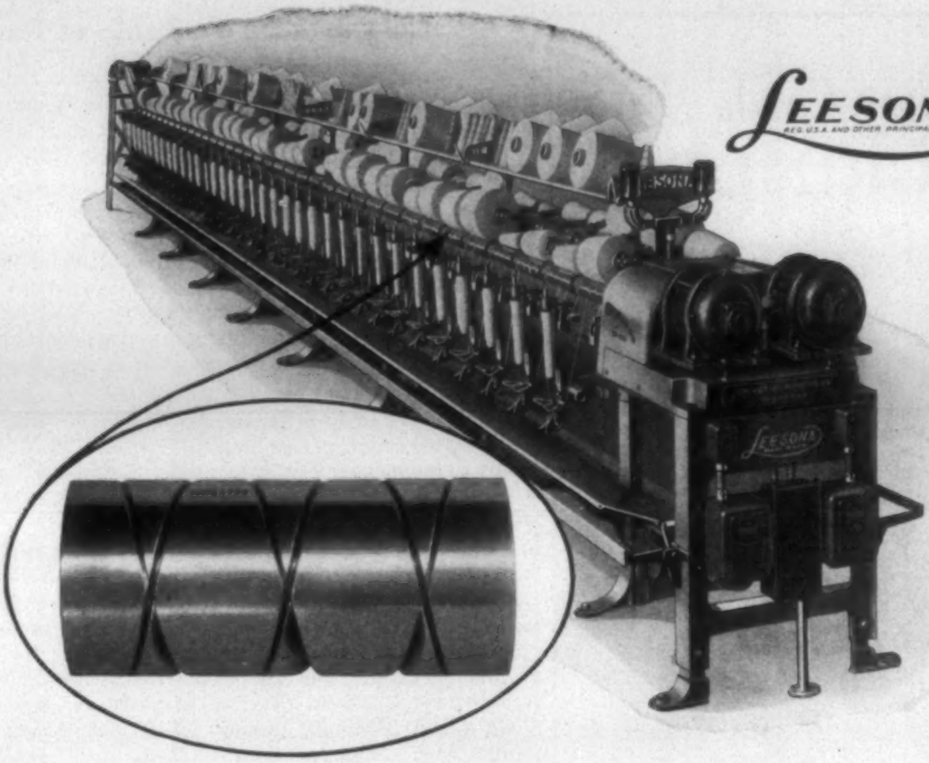
have established a reputation all over the South for absolute DEPENDABILITY

Also Manufacturers of
Narrow Fabrics

WEBBING FOR MECHANICAL USES
up to six inches in width
COLUMBUS TAPE FASTENERS
for spinning tape
NON-STRETCH WEBBING
for automobile tops
CASKET WEBBING

SPINNING AND TWISTER TAPES
various widths, weights, and weaves
LOOP EDGE WRAPPING TAPE
for tire manufacturers
PLAIN WRAPPING TAPE
for vulcanizing purposes
TAPE SEWING THREAD

GEORGIA WEBBING & TAPE CO.
COLUMBUS, GEORGIA



LEESONA
REG. U.S.A. AND OTHER PRINCIPAL COUNTRIES

#40 Universal Winder

The Rotary Guide Drum of the New Universal No. 40 Winder performs all of the functions of the reciprocating parts that are limiting factors to the speed of the ordinary winder. All cams and cam actuated thread guides have been eliminated thus making the No. 40 Machine simpler in construction and operation than any winder heretofore produced. Mounted on ball bearings, this new grooved drum permits much higher winding speeds and correspondingly greater production per spindle. A much less complicated, longer lived machine is provided at lower investment cost.

UNIVERSAL WINDING
COMPANY
BOSTON

319

UNIVERSAL WINDERS

Grind Your Cards With
ROY GRINDERS

and note the remarkable improvement in the stock. Take note of the constant evenness of the sliver in weight and quality. Note also the increased efficiency and quality in the subsequent processes,—through the spinning.

All makes of grinders re-conditioned.

B. S. ROY & SON CO.
Established 1868
WORCESTER MASS., U. S. A.

ROY TEXTILE GRINDING MACHINERY

Prompt Service

To serve the textile industry promptly there are jobbers and storage stocks of Wyandotte Textile Alkalies in all sections of the country. Mills using Wyandotte can be sure of prompt shipments.

Wyandotte Service Men, with a practical knowledge of textile processing, are also located where they can quickly serve mills everywhere.

It will pay you well to investigate the complete service which Wyandotte Textile Alkalies can give you.

Order from your Supply Man, or write for detailed information.

Wyandotte
Quality and Service
Textile Alkalies

The J. B. Ford Co., Sole Mfrs., Wyandotte, Mich.

The Quota Plan—Plenty of Pie

(*Continued from Page* 24)

built or rehabilitated for night operation should be permitted to run overtime because it had spent money for such equipment might be met by a group offer to amortize the equipment.

The quota plan would change losses into profits, and it is conceivable that profits might be assessed to compensate certain mills that might be called upon for the extraordinary curtailment. If amortization through profits is not the way to adjust inequalities, then the equipment of night runners could be taken into consideration by the Institute in figuring the quotas.

If the quota plan has the endorsement of a large number, it would be in order for the Cotton-Textile Institute to call a meeting of one group, preferably the print cloth units, and have these mills endorse the plan in principle without attempting at any such meeting to adopt the definite formula for procedure.

The plan should then be left with the Institute, each manufacturing unit to send in promptly such statistics and data as might be required. With these figures in hand, the Institute would be ready very promptly to make its recommendations and to apportion the quotas.

It may be said that the proposition is not far removed from the curtailment program which is now in force, but it has this additional advantage—it may appeal to and bring into agreement some interests that have not believed in previous movements, and it points the way to curtailment with profit which several important independent operators insist upon visualizing before participating in any group action.

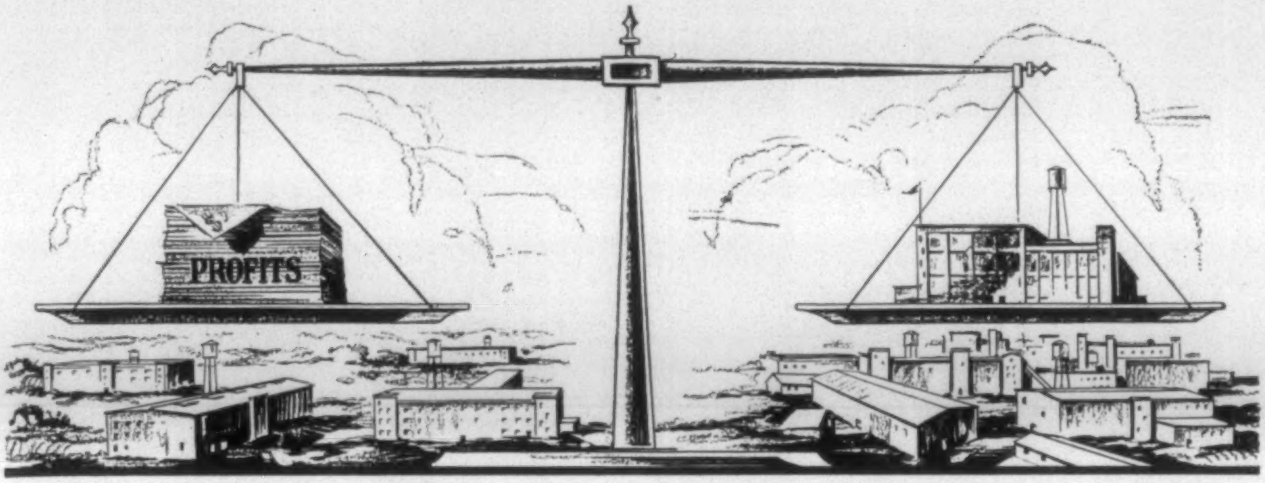
Then and Now

(*Continued from Page* 54)

position and the twist was put in the roving by a felt belt which ran the length of the speeder. The felt belt ran together, of course; the top going one direction and the bottom the other.

The spinning was very crude; a hand could run only one side. There were no top or bottom clearers. Spinners were paid 35c per day for one side. A woman ran two looms and made 40c per day. They were hard times then. No pay day; no schools; a little church had preaching once a month and sometimes every three months. Well we did not need a preacher much anyway. Tired and hungry folks are so humble if they died they would go to heaven anyhow.

I worked my way up through trials and tribulations through the great evolution of the cotton mill machinery. Today we have the best equipped mills in the world. We can make, in the South, any class of goods that can be made in the world. We have built our mills up in the South to the highest efficiency, providing the operatives with all the modern living conditions and making their work easy and their homes comfortable, with good schools and churches. Operatives of 40 years ago never dreamed of such things. Now that the mills are run at the highest efficiency and the operating costs have been cut to the bone, some of the best mills in the country insist on selling their output below the cost of making them. I can't understand why they do that when they could sell at a profit just as well. Night work will have to be cut out and goods sold at a profit or we are headed for the rocks. So I hope we will all realize a mill is built to make money and not to run at a loss. — *W. C. York, Superintendent, Sanford Cotton Mills, Sandford, N. C.*



1 To 4 Now 4 To 1

LET this manufacturer tell you his doubts and worries when he moved his first factory to Piedmont Carolinas.

"A few years ago we decided to move one of our plants away from the old, highly industrialized section where we had always operated.

"Our engineers studied the industrial possibilities of the whole country. They recommended a location in Piedmont Carolinas.

"I want to tell you that every executive in our company watched that one unit like a hawk. It was an experiment. We wondered if the labor could turn out work as good as our old hands. We were worried about supervisors, the foremen and minor executives.

"But soon the shoe was on the other foot. That Piedmont plant began to 'show up' our old units. Despite the fact that everything was new—lands, buildings and so on—our overhead there was much lower than here. We couldn't have duplicated that plant here at anywhere near its cost down there.

"Our heating, of course, was much lower. So was our lighting.

"But it wasn't those items that counted most heavily. Our labor costs showed the most significant difference—not so much in weekly payroll as in productiveness. We have practically no labor turnover and absolutely no labor trouble.

"The men who direct our company soon had some facts before them that made it easy to decide that Mill No. 2 had better be moved to the Piedmont.

"Today we have four out of our five plants down there. How soon the fifth goes, none of us knows. It's just a matter of the margin of profits on its operations. If they drop much more, it will be brought, too.

"Our management policy is to require each unit to earn enough extra profits to pay for the cost of moving within a reasonably short time—and each of the mills we have moved up to now has beaten the time limit we set."

This manufacturer is one of the largest in his line. His product is probably used in your home. His observations are based on operation records, cost sheets and financial statements.

FACTS

If you want the facts as they might apply to your industry, send for the book illustrated here. Address Industrial Dept., Room 120, Mercantile Bldg., Charlotte, N. C. Your copy will be sent gladly.

DUKE POWER COMPANY

SOUTHERN PUBLIC UTILITIES COMPANY AND OTHER ALLIED INTERESTS

History and Development of the Synthetic Yarn Industry

(*Continued from Page* 60)

that some very beautiful fabrics and prints are produced abroad, but it must be remembered that only the best of these ever reach America. The bulk of the European production, just as in America, is used at home. As the demand abroad is for the cheaper materials, the bulk of the production meets this demand and generally only the very best materials reach America.

PRODUCTION FIGURES

In 1928 the United States alone produced as much synthetic yarn as the entire world only five years earlier, U. S. production being 97,701,000 pounds in that year. It is possible, with the reduced price of these yarns and better business in 1931, that we may this year produce as much yarn as the entire world made in 1924.

The world's synthetic yarn production for 1929 was 17 per cent greater than that for 1928; it has been estimated that the increase in synthetic yarn consumption during this period was twice as great as the increase in production. In March, 1930, one authority estimated that the overproduction of synthetic yarns in the world was 4 or 5 per cent, although the total 1930 production was only about 6 per cent greater than for 1929.

In 1925, the yarns produced by the fourteen American plants were valued at $88,007,873. In 1927, the nineteen American plants produced $106,468,752 worth of yarn. It has been estimated that the present thirty plants may produce 174,360,000 pounds of yarn in 1931, which at present prices, may be worth about $170,000,000.

On the basis of the 20,000 employees in 1925, and 27,000 in 1927; and considering the increased efficiency during the three-year period, there may have been about 37,000 to 40,000 employees in this industry in 1930, and this may reach some 45,000 during 1931, if the 175,000,000 pounds estimated production is reached. Knowing that these workers received wages and salaries in 1925 about $25,500,000 and in 1927 about $32,000,000, we may assume that the increased number in 1930 received about $45,000,000 and the increased number in 1931, may receive about $50,000,000 if wages are not reduced.

At various times in the past there has been a feeling that the maximum consumption or saturation point for the synthetic yarns was rapidly approaching in America, as well as elsewhere. However, it should be pointed out that even in 1930 the world's total production of these fibers was only about 3 per cent of that of the natural fibers.

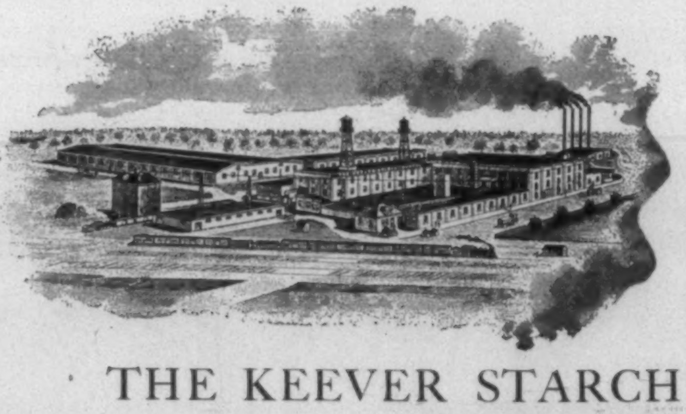
Without the numerous and very remarkable improvements and developments in both the quality and cost of these manufactured fibers, undoubtedly the saturation point would have been reached long ago. The demand today in America for the synthetic yarns is not for the cheapest products, but for the best that can be produced. This is just as it should be and every progressive man-either the quality or cost of these yarns opens up many new uses and outlets for their products. Therefore the interest continues in research upon every phase of synthetic yarn production.

THE FUTURE OF THE SYNTHETIC YARNS

Although the developments and improvements in the manufacture, quality, and cost of the synthetic yarns during the past have been tremendous, the developments taking place today are even more rapid and important than ever before in its history. Every advance in this field has been—and is—founded entirely upon scientific research. Most of this research has been in either strictly chemical or chemical engineering fields. As compared to the wonderful progress in this industry, the rest of the textile industry has been standing still, rooted in its own ignorance in the fundamentals involved in almost every step of its manufacturing processes.

The synthetic yarn industry of the world is today about forty years old, and that of America only about twenty years old. During the past five years, in spite of all of the remarkable improvements in quality, the price of this yarn has decreased from $2 to $0.75, a drop of 62.5 per cent. Can anyone doubt the future of such an industry? The present slump in the synthetic yarn, and *all other industries*, is the first really serious setback ever experienced by this industry. Naturally some of those connected with the synthetic yarn industry have become somewhat pessimistic but, fortunately, this is not the general consensus of opinion. "Sweet are the uses of adversity" and they will undoubtedly serve to even fur-

VICTOR MILL STARCH—The Weaver's Friend



It boils thin, penetrates the warps and carries the weight into cloth.

It means good running work, satisfied help and one hundred per cent production.

We are in a position now to offer prompt shipments.

THE KEEVER STARCH COMPANY
COLUMBUS, OHIO
DANIEL H. WALLACE, Southern Agent, Greenville, S. C.
C. B. ILER, Greenville, S. C. F. M. WALLACE, Columbus, Ga. L. J. CASTILE, Charlotte, N. C.

ther strengthen and fortify the synthetic yarn industry of the world.

Synthetic yarn is the one fiber where the production is under the absolute control of man. In the production of all of the natural fibers, capricious nature is the controlling factor. During the past few years the tendency towards mergers and consolidations in the synthetic yarn industry has probably been greater than in any other. Of course this tends to place the control of synthetic yarn production largely in the hands of a few very large companies. These factors indicate that the selling price of the synthetic yarns will never go below the cost of production for any long period of time, and this is a very important point for investors.

Every drop in the price of any variety of synthetic yarn, and every improvement in quality, opens up many new fields for their utilization. Every new use brings an increased demand and production. At the present time it is probably costing between $0.58 and $0.70 a pound to produce 150 denier yarn by the viscose process. As mentioned above, this yarn is now selling for $0.75 per pound. The 150 denier rayon yarn corresponds in size to about a 36s cotton yarn. Just as in the case of all other yarns, the finer the synthetic yarn the more it costs to manufacture it, but in the synthetic yarns this increase in the cost of manufacturing the fine yarns is not as great as in the fine cotton yarns. The selling price of 50 denier rayon yarn is now about $2.15 a pound. This corresponds to about 100s singles in mercerized cotton, which are selling for about $1.50 or $1.60 per pound. It is possible that some plants may soon be able to manufacture the finer sizes of rayon yarns for less than the cost of high quality, combed, bleached, and mercerized cotton yarns. This will undoubtedly eventually bring about a very considerable reduction in the amount of fine cotton and mercerized yarns used, and a corresponding increase in the use of synthetic yarns. These yarns have already considerably decreased the use of natural silk for many purposes, even in the Orient, the home of true silk.

IMMEDIATE CHANGES

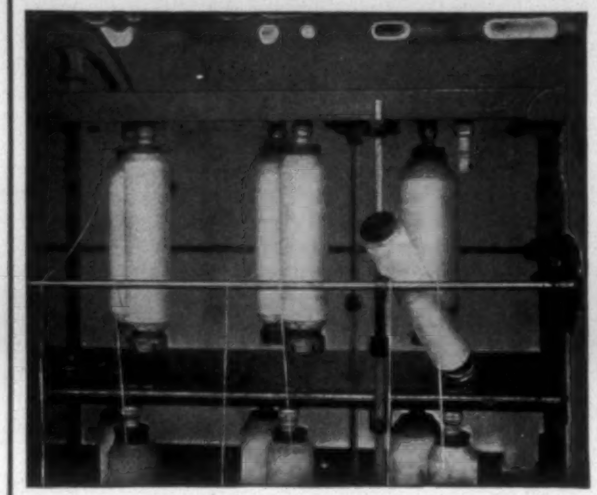
Undoubtedly one of the greatest changes in the immediate future in the synthetic yarns will be in the position of acetate silk. This is entirely due to the superior quality of this product and to the rapidly decreasing manufacturing costs by this process. Practically every large synthetic yarn manufacturing company is either directly or indirectly interested in the manufacture of yarn by the acetate process, and the Celanese companies are practically the only independent group of synthetic yarn manufacturers in the world today. Another trend in the industry in the past has been the gradual elimination of the nitrate process in favor of cheaper methods of manufacture. Although the present nitro yarn is very satisfactory, the production cost is undoubtedly higher than that of the viscose type.

What about the textile industry? Is it going to profit by the remarkable success of research in the synthetic yarn industry, and by developing textile research, applying the results of this research, along with better control methods, assume its rightful place as one of the progressive industries in the most progressive country in the world?

HARVEY L. FOX

Harvey L. Fox, overseer carding and spinning at the Fall Manufacturing Company, Granite Falls, N. C., died suddenly last week of heart failure. He had been connected with the mills for some time and was regarded as an unusually efficient overseer.

FOR BETTER BUSINESS
VISIT NEW YORK
★ 2^{50} daily ★
• • • secures a fine room *and* bath • • •
others at $\$3^{00}$ *and* $\$3^{50}$
AT ONE OF NEW YORK'S BEST HOTELS
★
The BRISTOL
48th ST. EAST OF B'WAY ▲▲ NEW YORK CITY
OWNERSHIP MANAGEMENT ▲▲ T. ELLIOTT TOLSON, Pres.
LATZ INC



Include Eclipse Bobbin Holders in your modernization program!

"The Textile industry is stepping out."

More and more textile mills are adopting modern equipment—modern methods. Eclipse Bobbin Holders fit right into such plans. They replace "out of date" wooden skewers. They improve the quality of the yarn.

With Eclipse Bobbin Holders on your creel boards, lint and fly can't accumulate — cleaning is simpler. Yarn or roving is not strained.

These Ball Bearing Holders are rigidly fixed to the top of the creel board—bottoms are free and clear. They're quickly installed — easily bolted through skewer holes in the frame. Give them a trial—they *belong* in all modernization programs.

ECLIPSE

ECLIPSE TEXTILE DEVICES, INC.
Elmira, N. Y.

ECLIPSE
BOBBIN HOLDER

Birthday Greetings

(*Continued from Page* 58)

If my memory serves me right, I have been a continuous subscriber since your first edition and can truthfully state, that in my opinion, you have at all time sincerely and conscientiously sought to serve the best interest of every part and person connected with the textile industry. With kind personal regards, I am,—*R. T. LeGrand, Treasurer and Manager, Shelby Cotton Mills, Shelby, N. C.*

I want to congratulate you on your 20th birthday and to say that I am sure all of your readers have appreciated the type of publication whch you have been sending out from week to week and which has continued to improve from year to year. I sincerely hope that you personally may get in at least another twenty years and that your interest in the industry will continue and that the Southern Textile Bulletin may prosper even to a great er extent than it has in the past.—*L. W. Clark, General Manager, Spray and Draper Plants, Carolina Cotton & Woolen Mills, Spray, N. C.*

I notice with interest that you are going to celebrate the Twentieth Anniversary of the Southern Textile Bulletin next month, and I want to congratulate you for the splendid work done, and hope for you many more years of usefulness to the cotton industry of the South.

I have been with the Exposition Cotton Mills since the establishment of the Bulletin, and with the exception of two short periods of illness, have not missed reading a copy.

I believe the mill workers of the South have no better, or more far-seeing champion of their cause than you. The time is coming when the honest but misguided outside meddlers will recognize this.

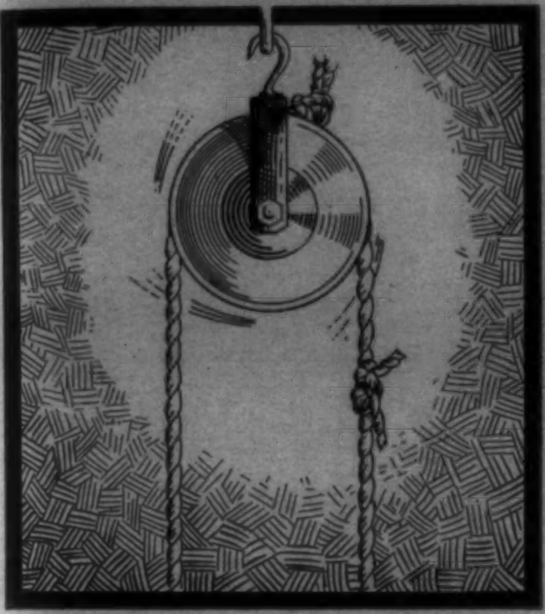
With congratulations and thanks for what you have already done, and best wishes for a successful continuation of your program.—*P. E. Glenn, Secretary and Treasurer, Exposition Cotton Mills, Atlanta, Ga.*

On occasion of the Twentieth Anniversary of your forceful publication, the Southern Textile Bulletin, permit me to give expression to a feeling which I believe is shared by the Southern textile industry in its entirety. More power to you. Here's hoping that good health will permit you to continue to carry on as you have so ably in the past.

The Southern Textile Bulletin is more than a publication, it has been and is a distinct factor in the development, promotion and protection of the Southern textile industry. Your services as its editor have been immeasurable, and every individual in any way connected with or dependent upon the Southern textile industry should feel grateful to you and your publication.—*M. W. Heiss, Proximity Manufacturing Co., Greensboro, N. C.*

William de Min of the export department of the Pepperell Manufacturing Company has been visiting Southern plants in Opelika, Ala., and Lindale, Ga. Mr. de Min will visit Cuba, where the company maintains its own office and following his visit there will go to Haiti. This has been Mr. Wolff's first opportunity to visit the foreign plants since becoming associated with the plants here.

During Mr. Wolff's absence B. C. Dunlop, vice-president, will be in charge of the former's duties, according to an announcement made by S. R. Fuller, Jr., chairman of the board.



You wouldn't use a pulley rope like this

...are you as careful in selecting Knitting Yarns?

No man alive would try to use a pulley rope containing great bulky knots. It is too obvious that free movement would be hindered.

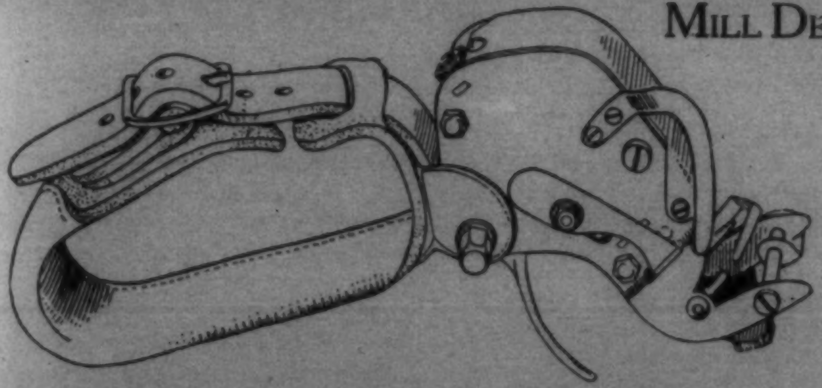
But are you sure that the yarns you buy are free from those large spooler knots—knots a thousand times more harmful than those in the pulley rope? This type knot causes delays and trouble—to say nothing of seconds and lost profits.

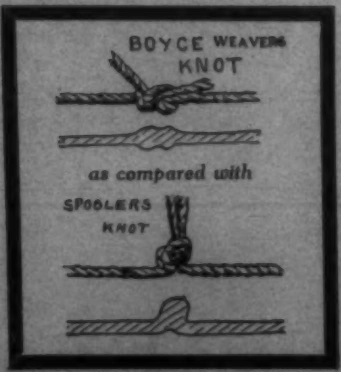
These unnecessary costs can be eliminated if you assure yourself that the knitting and weaving yarns you purchase contain weaver's knots ONLY. Such knots are tied by the famous BOYCE WEAVER'S KNOTTER, and most of the up-to-date mills use them.

You can also use these Knotters to advantage right in your own mill.

Write for information telling you more of the use of the Boyce Knotter in the knitting mill.

MILL DEVICES COMPANY, INC.
Gastonia, N. C.





Northern Office
38 Franklin St.
Providence, R. I.

Canadian Representatives
W. J. WESTAWAY CO.
Hamilton, Ontario, Canada

European Representatives
MELLOR, BROMLEY & CO., LTD.
Leicester, England

BOYCE WEAVER'S KNOTTER

HIGH SPOTS IN CHEMICAL HISTORY

No. 2 of a series of advertisements tracing the development and uses of modern chemicals

In 1884, Hilaire de Chardonnet, a French nobleman, patented a process for manufacturing artificial silk, which consisted in forcing nitrocellulose through fine capillary openings.

CELLULOSE

SINCE the days of the early Chinese and Egyptians, the non-nitrogenous skeleton of plants—generally known nowadays as cellulose—has been employed in making many of mankind's most useful commodities.

To the modern, resourceful chemical engineer has fallen the task of taking vegetable fibre and magically transforming it into products of usefulness and beauty . . . articles which greatly affect habits of living and introduce important innovations throughout industry.

The Paris exposition of 1889 saw the first gown designed entirely from man-made silks. The gossamer fabric startled the skeptical world and marked the birth of rayon, which, as the world now knows, is woven from chemically treated cellulose.

Today, cellulose is the basic ingredient of paper, photographic film, explosives, paints, lacquers, textiles, celluloid products, toilet articles, radio parts, airplane dope, synthetic leather, synthetic wood, hats, rope, twine, wrapping material, wallboard and countless other products . . . all of which form a remarkable testimonial to the ingenuity of the modern chemical industry.

It is hazardous to predict what the future holds in store for commodities made from chemically processed cellulose. Even if chemical science contributed no future cellulose products, the thousands of articles now made from this essential basic material would rank high in the history of chemical achievement.

• • •

Knowing the importance of high-grade chemicals of dependable purity and uniformity in modern manufacturing processes, leading manufacturers of cellulose products come to Mathieson for caustic soda, chlorine, soda ash and ammonia.

Great Structures Rest on Strong Foundations

MATHIESON CHEMICALS EAGLE-THISTLE

SERVICE

RESOURCES RESEARCH

MATHIESON CHEMICALS

Soda Ash . . . Caustic Soda . . . Bicarbonate of Soda . . . H T H (Hypochlorite) . . . Liquid Chlorine . . . Bleaching Powder . . . Ammonia, Anhydrous and Aqua . . . PURITE (Fused Soda Ash)

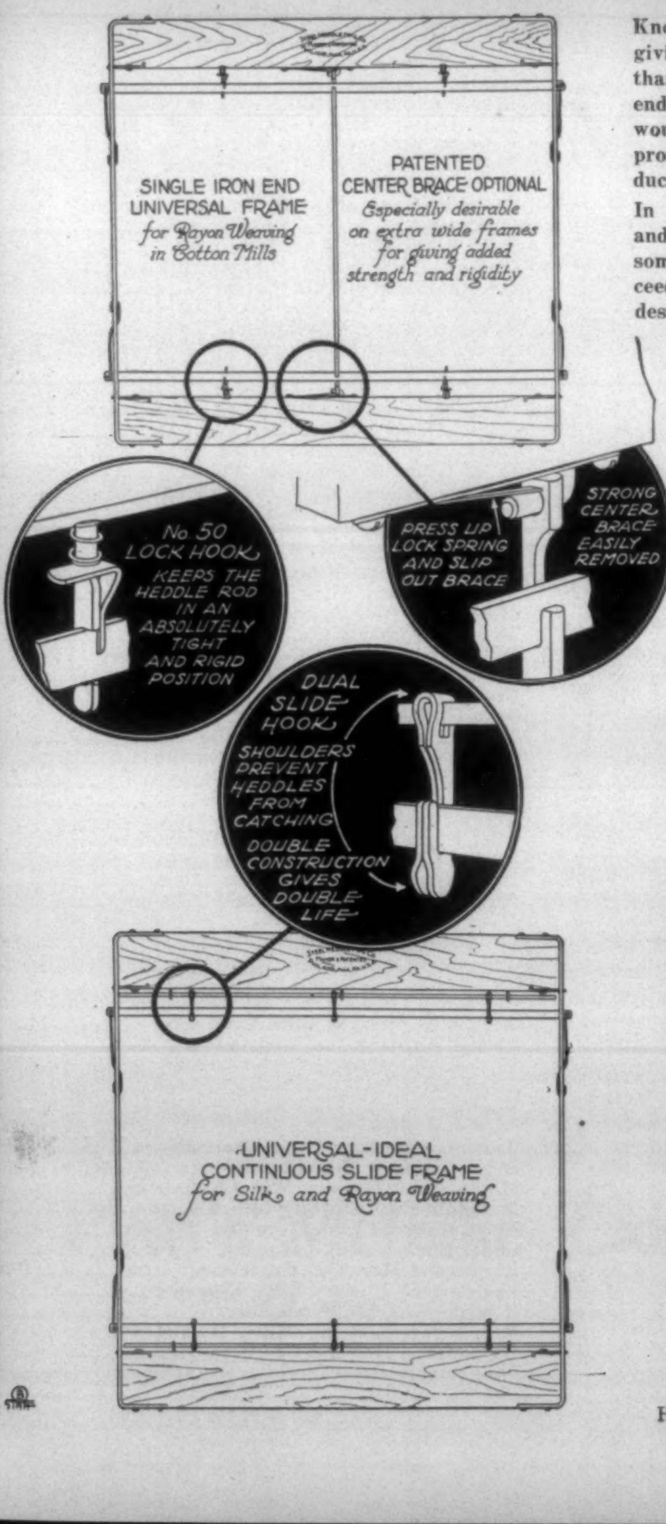
The MATHIESON ALKALI WORKS *(Inc.)* 250 Park Ave., New York, N.Y.

Philadelphia Chicago Providence Charlotte Cincinnati

Works: Niagara Falls, N.Y., Saltville, Virginia

Warehouse stocks at all Distributing Centers

FRAMES
THAT ARE BETTER!


SINGLE IRON END
UNIVERSAL FRAME
for Rayon Weaving in Cotton Mills
PATENTED
CENTER BRACE OPTIONAL
Especially desirable on extra wide frames for giving added strength and rigidity
No. 50 LOCK HOOK
KEEPS THE HEDDLE ROD IN AN ABSOLUTELY TIGHT AND RIGID POSITION
PRESS UP LOCK SPRING AND SLIP OUT BRACE
STRONG CENTER BRACE EASILY REMOVED
DUAL SLIDE HOOK
SHOULDERS PREVENT HEDDLES FROM CATCHING
DOUBLE CONSTRUCTION GIVES DOUBLE LIFE
UNIVERSAL-IDEAL
CONTINUOUS SLIDE FRAME
for Silk and Rayon Weaving

Knowing that our success depended upon giving the textile industry something better than they were using, we have constantly endeavored to produce loom harness that would simplify operations and set-up—produce a better material at increased production.

In the matter of Heddle Frames for Silk and Rayon, the two illustrated will give you somewhat of an idea of how we have succeeded. These frames are of our exclusive design, consequently their advanced features cannot be duplicated on any other make frame.

Steel Heddle Frames possess utmost rigidity made possible by heavy steel ends scientifically braced.

All wood parts are selected and prepared with great care—air dried at least three years, planed to exact thickness and carefully finished to avoid absorptions of humidity.

The No. 50 Lock Hooks prevent the possibility of heddle rods unhooking while the loom is in motion.

Continuous slide frames are equipped with new non-catching double acting slide hooks.

Send for Details

Steel
Heddle
Mfg. Co.

2100 W. Allegheny Ave.
Philadelphia, Pa.

"Originators of the Flat Steel Heddle"

Southern Plant: *New England Office:*
621 E. McBee Ave., 44 Franklin St.,
Greenville, S. C. Providence, R. I.

Foreign Offices:
Huddersfield, England—Shanghai, China

Increase in Mill Equipment in 1930

(*Continued from Page* 17)

	Looms
Holt, Love & Smith, Burlington	36
North Carolina Silk Mills, Burlington	12
Piedmont Weavers, Inc., Burlington	42
Sapona Cotton Mills, Cedar Falls	160
Glen Raven Cotton Mills, Glen Raven	6
Minette Mills, Grover	28
Pinehurst Silk Mills, Pinehurst	96
Dilling Cotton Mills, Kings Mountain	128
National Weaving Co., Lowell	74
Warlick Mfg. Co., Newton	48
Darlington Fabrics Corp., Paw Creek	36
Hannah Pickett Mills, Rockingham	144
Hannah Pickett Mills No. 2, Rockingham	240
Caramount Mills, Inc., Rocky Mount	28
Collins & Aikman Corp., Roxboro	189
Beacon Mfg. Co., Swannanoa	110
Total	1,597

South Carolina

Victor-Monaghan Co., Arlington	50
Fort Mill Mfg. Co., Fort Mill	70
Piedmont Plush Mill, Greenville	6
Arcade Cotton Mills, Rock Hill	10
Slater Mfg. Co., Slater	110
Total	246

Tennessee

Kingsport Silk Mills, Kingsport	50
Cumberland Silk Mills, Rockford	100
Total	150

Texas

Texas Gauze Mills, New Braunfels	30
Total	30

Virginia

Klotz Silk Mfg. Co., Blackstone	150
Frank Ix & Sons, Charlottesville	20
Schwarzenbach-Huber Co., Covington	52
Total	222

Loom Increase By States

Alabama	231
Georgia	602
North Carolina	1,597
South Carolina	246
Tennessee	150
Texas	30
Virginia	222
Total	3,078

Clark's Annual Knitting Machine Increase List

The following list gives the name and location of each knitting mill that increased its knitting equipment in 1930, together with the total knitting machines installed by States and for the South.

Alabama

	Knitting Machines
Jacobs & Spivey Hosiery Mills, Bridgeport	50
Gloria Underwear Mills, Eufaula	60
Scottsboro Hosiery Mills, Scottsboro	25
Total	135

Georgia

	Knitting Machines
Atlanta Hosiery Mills, Atlanta	8
William Carter Co., Barnesville	82
Fuller Hosiery Mills, Carrollton	10
Browning Hosiery Mill, Marietta	20
Moreland Knitting Mills, Moreland	10
Newnan Hosiery Mills, Newnan	75
*Arrowhead Fashion Mill, Rossville	30
Montgomery Knitting Mills, Summerville	5
*Golden City Hosiery Mills, Villa Rica	50
Villa Rica Mfg. Co., Villa Rica	27
Total	317

Louisiana

National Hosiery Mills, New Orleans	3
Total	3

Mississippi

*Corinth Hosiery Mills, Corinth	24
D. & W. Hosiery Mills, Meridian	70
Total	94

North Carolina

Lillian Knitting Mills, Albemarle	4
Acme Hosiery Mills, Ashboro	50
Ashboro Hosiery Mills, Ashboro	73
Bossong Hosiery Mills, Ashboro	18
*Pilot Hosiery Mills, Ashboro	100
Belmont Hosiery Mills, Belmont	10
East End Hosiery Mill, Burlington	1
Full-Knit Hosiery Mill, Burlington	6
Globe Knitting Mills, Burlington	8
McEwen Knitting Co., Burlington	1
S. Y. W. Hosiery Mills, Burlington	40
Durham Hosiery Mills, Chapel Hill	58
Hoover Hosiery Mills, Concord	2
Ragan-Parker Knitting Co., Ellerbee	41
*A. W. Neimyer, Graham	3
Mock, Judson, Voehringer Co., Greensboro	104
Hickory Hosiery Mills, Hickory	80
*Lyerly Full-Fashioned Hosiery Mills, Hickory	15
Commonwealth Hosiery Hills, High Point	24
Crown Hosiery Mills, High Point	105
Guilford Hosiery Mills, High Point	100
O. E. Kearn & Son, High Point	25
Robbins Hosiery Mills, High Point	45
Vance Knitting Co., Kernersville	45
Shoaf-Sink Hosiery Mills, Lexington	100
Dependable Hosiery Mills, Liberty	39
Elizabeth James Knitting Mill, Marion	36
McPar Hosiery Mills, Marion	35
Morganton Full-Fashioned Hosiery Mills	25
Mt. Airy Knitting Co., Mt. Airy	37
Wilkes Hosiery Mills, North Wilkesboro	25
Sterling Hosiery Mills, Spindale	4
Staley Hosiery Mills, Staley	2
*Star Hosiery Mills, Star	25
Phoenix Mills, Inc., Statesville	35
*Stimpson Hosiery Mills, Statesville	8
Miller-White Hosiery Mills, Taylorsville	9
Maurice Mills Co., Thomasville	65
Berry Hosiery Mills, Valdese	3
Pilot Full-Fashion Hosiery Mill, Valdese	2
Varina Knitting Co., Varina	30
*Joyce Hosiery Mill, Winston-Salem	30
O'Brien Hosiery Mills, Winston-Salem	25
Total	1,493

South Carolina

*Florence Cel-Lus-Tra Corp., Florence	16
Appalache Hosiery Mill, Landrum	5
Powell Knitting Co., Spartanburg	83
Total	104

Tennessee

Browning Hosiery Mills, Chattanooga	40
Bryan Hosiery Mill, Chattanooga	4
Miller-Smith Hosiery Mill, Chattanooga	12
Mountain City Knitting Mill, Chattanooga	34
Knox Hosiery Mill, Cleveland	23
Cadet Hosiery Mill, Columbia	51
Englewood Mfg. Co., Englewood	5
Fisher-Beck Hosiery Mill, Kingsport	15
Holston Mfg. Co., Knoxville	15
Morristown Knitting Mills, Morristown	35
Washington Hosiery Mill, Nashville	20
Philadelphia Hosiery Mills, Philadelphia	8
Woosley Knitting Mills, Shelbyville	1

(*Continued on Page* 72)

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*Indicates new mill.

Why continue to pay the cost of card grinding and stripping?

CONSIDER THE ECONOMY OF USING

Platt's METALLIC Card Clothing

(patented in all important countries)

Since the introduction of this patented Platt's product, carding costs have been reduced to a point where the economies obtained are proving important factors in making production more profitable. Under present competitive conditions, no mill can afford to ignore the economy and other advantages of using metallic clothing,

For Cotton, Worsted and Woolen Cards

In addition to the fact that grinding and stripping, with all accompanying expense is completely done away with, a comprehensive series of comparative tests has definitely demonstrated that Platt's Metallic Card Clothing surpasses any other type of clothing for regularity, strength of thread and quantity of output. The results of these tests are available. The rapidly increasing number of mills that are using this modern card clothing report it a paying investment from every angle. Surely it merits investigation.

WRITE US FOR FULL PARTICULARS

Platt's Metallic Card Clothing Co.

P. O. Box 407 - - - - Lexington, N. C.

SUPERINTENDENTS AND OVERSEERS

We wish to obtain a complete list of the superintendents and overseers of every cotton mill in the South. Please fill in the enclosed blank and send it to us.

____________________, 19____

Name of Mill______________________________

Town______________________________

____________Spinning Spindles____________Looms

______________________________Superintendent

______________________________Carder

______________________________Spinner

______________________________Weaver

______________________________Cloth Room

______________________________Dyer

______________________________Master Mechanic

Recent changes______________________________

____

BRIGGS-SHAFFNER COMPANY
Winston-Salem, N. C.

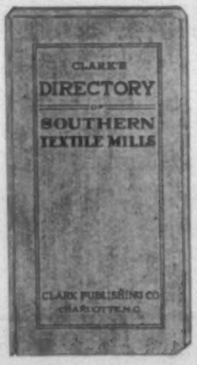
MECHANICAL ENGINEERS
FOUNDERS AND MACHINISTS

Builders of Fine Textile Machinery

We solicit your inquiries for Machinery and Castings

Clark's Directory

OF SOUTHERN TEXTILE MILLS



Gives capital, number of machines, officers, buyers, superintendents, kind of power used, product and telephone number, of every Southern Cotton Mill. Also contains sections: "Hints for Traveling Men," and Clark's Code Word Index.

Printed on thin paper, cloth bound, pocket size.

Two Revisions Yearly keeps this Directory Accurate and Complete. A copy should be in the office of every concern which sells to Southern Textile Mills and in the pocket of every Salesman who travels this territory.

Current Edition: January, 1931

Price $2.00

Clark Publishing Co.

Charlotte, N. C.

Textile Imports 5% of Domestic Production

Despite a popular belief to the contrary, importation of European textiles into the United States amounts in total value to only about 5 per cent or less of our domestic production and consists mostly of novelty or specialty goods which serve as samples for our manufacturers. This fact is shown by the National Industrial Conference Board in its recent book "Trends in the Foreign Trade of the United States."

New weaves and designs are constantly brought in and if they take the popular fancy and the demand becomes great enough to justify the expense, then the American manufacturer will change over his plant and begin to manufacture or imitate them on a large scale. That is the way cotton manufacturers were led to produce voiles, a new cloth that originated in England about 1908. Silk chiffons originated in France, were reproduced here and are now being produced in quantity. The same is true of georgette.

Transparent velvet, a new pile fabric of rayon on a silk ground, was introduced into the United States from France in 1925 and met with instant success. The demand for this fabric has taxed the production capacity of both American and European manufacturers and also helped our domestic industry to recover from a depression due to a shift in style from use of velvets in millinery.

Rayon Imports Decrease

Imports of rayon yarn and manufactures (including other synthetic textile) into the United States in 1930 were valued at $8,375,656, representing a drop of slightly more than 55 per cent from the preceding year and of about 46 per cent from 1928, according to statistics compiled by the Bureau of Foreign and Domestic Commerce. Rayon yarns, threads and filaments, which comprise the chief import item, suffered the heaviest loss, dropping from 15,950,000 pounds, valued at $12,146,926, in 1929 to 5,812,765 pounds, valued at $4,675,884, last year.

Yarn imports plus the domestic output resulted in a total of nearly 116,000,000 pounds of yarn coming onto the market during the year, a decline from about 139,000,000 pounds in 1929, and yet a larger quantity than in any other preceding year. Actual consumption during the year, however, has been estimated at around 100,000,000 pounds, so that with stocks brought forward from the preceding year the accumulation at the end of 1930 has been placed at about 25,000,000 pounds.

Whitmire Club Meets

Whitmire, S. C.—The Progessive Textile Club of the Whitmire plant of the Aragon Baldwin Corporation met on last Friday evening in its regular semi-monthly schedule. The meeting was called to order by the president, W. T. Morton and was held in the theatre of the Y. M. C. A. The subject for discussion was cleanliness. R. L. Woods, superintendent of the mill and Mr. Morton both gave interesting talks on the "Hows" and "Whys" of cleanliness.

Greensboro, N. C.—The advertising and sales force of the Industrial Rayon Corporation of Cleveland, Ohio, held a dinner meeting at the O. Henry Hotel here recently, which was attended by twenty-five local manufacturers and users of rayon. Hiram S. Rivitz, president of the corporation, made a short address at the occasion.

Padlocked Minds

have no use for a Business Paper . . .

IT'S not so much WHAT you read that counts, as what you read it FOR.

Reading to pass the time away is ONE thing—reading to get IDEAS for improving your business is another.

Men completely satisfied with what they have—insensible to progress—oblivious to change—these read (WHEN they read) for entertainment only.

But men whose minds are open to better methods, men whose minds are eager for news of new plans and new practices—these are the men who read the pages of their business papers.

In any industry . . . trade . . . profession, these are the men who count. And just as they are attracted to a publication by the practical, helpful character of its editorial content, so, in the same open-minded mood, they read its advertising pages.

ABP

THIS SYMBOL *identifies an ABP paper . . . It stands for honest, known, paid circulation; straightforward business methods, and editorial standards that insure reader interest. . . These are the factors that make a valuable advertising medium.*

THIS PUBLICATION IS A MEMBER OF

THE ASSOCIATED BUSINESS PAPERS, INC.

TWO-NINETY-FIVE MADISON AVENUE - - NEW YORK CITY

Do You Know of

Aktivin-S

The reliable and convenient
chemical ingredient
for better starch sizes and finishes

Booklet describing method on request

THE AKTIVIN CORPORATION
50 Union Square
New York City

Exclusive Southern Sales Agents

American Aniline Products, Inc.
1003 West Trade Street
Charlotte, N. C.

Will You Please Consider These Questions?

Are you getting excessive shedding?
Are you getting a large percentage of seconds?
Does your cloth feel harsh?
If so, write us, and we can help you.

John P. Marston Company
Importers
247 Atlantic Avenue, Boston

Increase in Mill Equipment in 1930

(*Continued from Page* 68)

	Knitting Machines
Trenton Mills, Trenton	15
Total	278
Virginia	
Bassett Knitting Mills, Bassett	23
Galax Knitting Co., Galax	10
Parker Hosiery Mill & Dye Works, Portsmouth	10
Dobson-Miller Co., Pulaski	35
Total	78

Knitting Machine Increase by States

Alabama	135
Georgia	317
Louisiana	3
Mississippi	94
North Carolina	1,493
South Carolina	104
Tennessee	278
Virginia	78
Total	2,502

Southern Traffic Men To Fight Rate Changes Proposed By Railroads

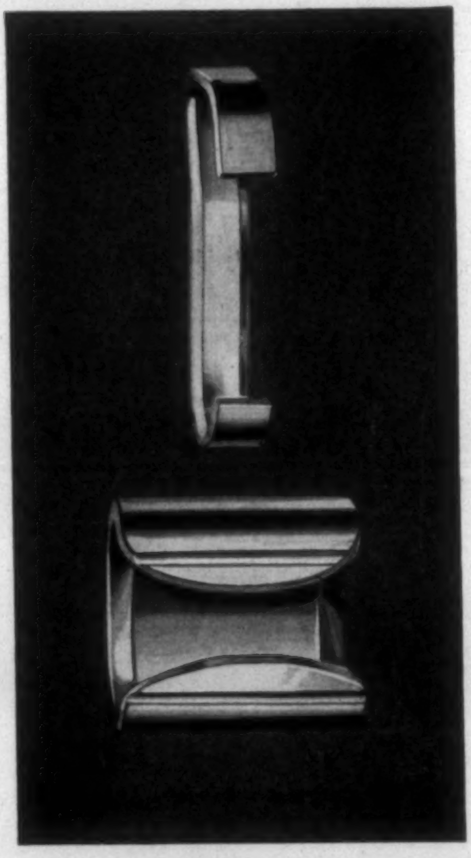
Birmingham, Ala.—Charles E. Jones, general manager of the Birmingham Traffic Association, was appointed chairman of the committee of traffic men to represent the Georgia and Alabama cotton textile manufacturing plants in their efforts to prevent an increase in freight rates on cotton factory products to other sections of the South and to the North, East and Central West. The proposed revision of rates would materially affect the shipments of factory products, cotton garments, knit goods, hosiery and other articles from Georgia and Alabama.

North Carolina, South Carolina and New England textile mill operators assert that Alabama and Georgie have enjoyed a preference in rates on these commodities for approximately 20 years and are said to be backing the railroads in their effort to have the higher rates put into effect on Georgia and Alabama products. The Georgia and Alabama operators' traffic committee is preparing data to show these States have no superior advantage over the Carolinas and New England.

Those associated with Mr. Jones on this committee are: C. W. Chears, traffic manager of the Cotton Growers' Association of Georgia; O. D. Keow, traffic manager of the Lincoln Mills of Alabama, Georgia plant; E. L. Hart, assistant manager of the Atlanta, Ga., freight bureau; J. H. Horsley, traffic manager of the West Point Manufacturing Co., West Point, Ga., and Henry N. Muller, traffic manager of the Lincoln Mills of Alabama, Huntsville, Ala.

The prominent textile officials who compose the committee which appointed the traffic committee are: W. D. Anderson of Macon, Ga., president of the Bibb Manufacturing Co.'s plants, chairman; Donald Comer, president of the Avondale Mills of Birmingham; J. H. Cheatham, president of the Georgia-Kincaid Mills of Griffin, Ga.; Norman E. Elsas, secretary and treasurer of the Fulton Bag & Cotton Mills of Atlanta, Ga.; H. F. Williamson, general manager of the American Net & Twine Co., of Atlanta, Ga., and George H. Lanier, president of the West Point Manufacturing Co. of West Point, Ga.

The Bevel edge gives evener yarn with less fly



PATENT NO. 1,728,540

THE new patented Bowen ***Bevel Edge*** Ring Travelers stand out as an important advancement in the spinning and twisting of all textile fibres. Complete elimination of angular edges . . . uniformity of tension never before attained . . . result in evener yarn with less fly. Comparative tests in a number of mills have brought to ***Bevel Edge*** Travelers enthusiastic acceptance by mill men. These travelers are adapted to spinning or twisting cotton . . wool . . worsted . . rayon . . silk . . jute . . asbestos . . and other fibres. It's easy to learn the money-saving advantage of ***Bevel Edge*** Travelers—simply try them in your own mill. Write for details and samples.

U.S.
RING TRAVELER
CO.

U. S. Ring Traveler Co.

Providence, R. I.

Antonio Spencer, Pres.

Amos M. Bowen, Treas.

SALES REPRESENTATIVES:

New England:
Carl W. Smith

Southern:
Oliver B. Land
Wm. P. Vaughan

Middle Atlantic:
Geo. H. H. Gilligan

A Traveler for Every Fibre

MADE IN THE SOUTH
FOR USE IN THE SOUTH

PAINTS

For Every Purpose

NOTE: Special Paints Especially Made for Mills and Industrial Plants.

Manufactured by

**Leland Moore
Paint & Oil Co.**

Charleston, S. C.

For Over 28 Years We Have Been Efficiently Serving Our Customers

DRONSFIELD'S PATENT,
"ATLAS BRAND"
EMERY FILLETING

"The New Flexible" "Needs no 'Demping'"

Stocks in Boston, Mass., and the South

TRADE MARK
ATLAS

The Standard Card-Grinding Medium

GUARANTEED "A" QUALITY
THE ONLY QUALITY WE MAKE

Used the wide world o'er, like
The DRONSFIELD CARD-GRINDERS

Stocked by the Principal Supply Houses

Sole Agents for Dronsfield's Machinery for U. S. A.:
John Hetherington & Sons, Inc.
161 Devonshire St., Boston, Mass., U. S. A.

Expect More Than Seasonal Gain in Spring Business

An extra seasonal increase in general business during the spring months, to be followed in the summer by a renewed period of decline, is the forecast made in the current issue of the Textile Organon, published by the Tubize Chatillon Corporation. The summer decline, it is stated, will be followed in the fall by the beginning of the long-looked-for basic, cyclical increase of business activity.

The textile industry as a whole will show more strength during the next few months, followed by a substantial summer decline but during the year 1931 its activity will be considerably in advance of the index of business in general, just as during 1930 its decline extended below the level of general business.

The textile industry is in a far better position than business in general because the prices of the textile raw materials are better deflated as a group and the industry "showed a more prompt and extended decline in 1930 than did general business. Both of these reasons point to textile activity operating at a level general business. The textile industry is in a far better position than business in general because the prices of the textile raw materials are better deflated as a group and the industry "showed a more prompt and extended decline in 1930 than did general business. Both of these reasons point to textile acivity operating at a level somewhat above general business in 1931."

In reviewing the rayon market and the effect of the recent price cut, it is pointed out that the past readjustment of prices downward continues to be a favorable factor in the market. The rayon market has a "firmer tone and confidence is greater than has been the case in over a year. Rayon sales during the past six weeks have been appreciably ahead of those in the same period last year and compare favorably with the high levels of that season in 1929." Manufacturers have continued to operate their plants on reduced schedule, the net results being that the large yarn stocks on hand as of December 31, 1930, have been considerably reduced.

Figures covering the year 1926 to date on the consumption of silk, cotton and wool, disclose the fact that while the "trend of silk consumption has been definitely upward at the rate of 12 per cent per year" during that period, cotton consumption, on the other hand, has declined at a rate of about 2 per cent per year and wool has declined about 1 per cent per year. "The following declines in consumption were apparent from 1929 to 1930 for the various fibres; cotton consumption, 24 per cent; wool consumption, 27 per cent; and silk consumption, 9 per cent.

Although a large supply of cotton was on hand at the end of January, 1931 (11,702,000 bales), prices have increased somewhat. This seems to discount the fact that there are indications of a smaller acreage during 1931, low fertilizer sales and lack of rainfall being decisive factors. Thus, prices are expected to "stay within the 10-11 cent range for two or three months yet to come."

"It is still our opinion that wool prices are not deflated enough, especially when compared with the prices of the other textile fibres. We expect to see weaker wool prices until they come into line with the lower cotton, silk and rayon prices, and especially until wool consumption comes definitely out of the doldrums into which it has most definitely slipped."

Spindle Hours Show Slight Increase

Washington.—The cotton spinning industry was reported by the Census Bureau to have been operated during January at 80.8 per cent capacity on a single shift basis, compared with 76.1 per cent in December and 100.3 per cent in January last year.

Spinning spindles in place January 31, totalled 33,345,152, of which 25,611,458 were active at some time during the month, with the average number operated during the month being 26,935,485 compared with 33,567,102, 25,522,820 and 25,539,058 for December and 34,630,866, 29,198,134, and 34,733,046 for January last year.

Active spindle hours for January totalled 6,359,871,952 or an average of 191 hours per spindle in place, compared with 5,516,378,249 and 176 in December and 8,173,380,372 and 236 in January last year.

Texas Mill Output in Jan. 59% Under 1930

Austin, Tex.—During January, the mills in Texas produced a total of 2,588,000 yards of cotton goods, according to statistics compiled in the Bureau of Business Research at the United Versity of Texas.

"This output was 23.1 per cent below the December total and 59 per cent below January, 1930," the bureaus' report said. "The total sales of 2,277,000 yards, also, were the smallest on record, falling 11.3 per cent below December and 54.3 per cent below January of the preceding year. The excess of production over sales amounted to 311,000 yards, a smaller excess than in recent month.

"Unfilled orders declined less sharply as compared to December than actual sales did. Combined sales and unfilled orders amount to 5.663,000 yards, only 358,000 yards less than at the close of the preceding month. Combined sales and unfilled orders in January, 1930, amounted to 11,875,000 yards."

Faith in Continued Advertising

The success of many firms is based upon the fact that they have continued their advertising through both booms and depressions and the failure of firms to profit by booms has often been due to the fact that they failed to advertise during the depressions and thereby lost ground in the minds of their former customers.

Printers Ink recently published the following expressions relative to the importance of continued advertising:

J. L. Johnson, president of the Lambert Pharmacal Company, replied, "Our opinion of the importance of continuity of advertising effort is shown by the ten-year record of our advertising expenditures."

J. A. Zehntbauer, president of the Jantzen Knitting Mills, Inc., answered, "Our experience is thoroughly convincing as to the necessity of advertising continuity. * * * In increasing our advertising outlay for 1931 we believe that we are sowing the seed of future volume and profits."

Louis W. Wheelock, vice-president, Stephen F. Whitman & Son, said: "We believe in advertising all the time. * * * Advertising just now is an expression of confidence in one's product and the future of America."

C. R. Palmer, president of Cluett, Peabody & Co., Inc., said, "In my opinion the one sure way to make national advertising count is to see that it is continuous."

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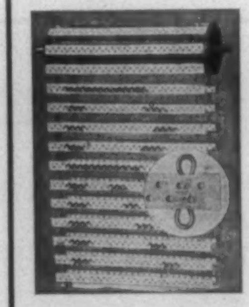

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DOMESTIC EXPORT
MERCHANDISING
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COTTON GOODS

New York.—The cotton goods markets continued firm and active during the week, with prices showing further advances on many constructions. Increased demand strengthened prices on fine combed yarn goods. Denims were half a cent a yard higher. News in all divisions of the market continued to be encouraging and there was a general feeling that the good buying, following the tremendous yardage of goods that was sold during the two preceding weeks, is an indication that definite and sustained improvement has reached the market.

Gray goods of print cloth yarns were in further demand with prices very firm on the strength of a continuing good business. During the past 48 hours sales of print cloth yarn constructions were conservatively estimated to have been in excess of 100,000 pieces. Standard print cloths made up the bulk of this total, with a good supplementary business done in checks and carded broadcloths. Narrow sheetings sold for spot and nearby at prices about ⅛c higher than the quoted levels of the day before. Some of the transactions here represented an improvement both in point of price and of volume. Less was heard of drills than on the day before. Other coarse yarn descriptions were quiet.

Carded broadcloth position was strong. Sales of April 112x60s were made at 9c during the day, which represented a ¼c advance. At least one make of spot goods was still to be had at 8½c, however, although the trend on these goods was firmer, particularly for contract. The 100x60s were reported sold.

Most of the print cloth business has been in four constructions, the 38½-inch 60x48s, 38½-inch 64x60s, 39-inch 68x72s, and 39-inch 80x80s. A large business was taken at prevailing rates, and further trading appeared on some of these numbers.

Prices were as follows:

Print cloths, 27-in., 64x60s	3⅞
Print cloths, 28-in., 64x60s	4⅛
Gray goods, 38½-in., 64x60s	5⅜
Gray goods, 39-in., 68x72s	6½
Gray goods, 39-in., 80x80s	7¾
Brown sheetings, 3-yard	7
Brown sheetings, standard	8¼
Brown sheetings, 4-yard, 56-60s	6⅜
Tickings, 8-ounce	15 a19½
Denims	12
Standard prints	7½
Dress ginghams	12½a13¾
Staple ginghams	8

Constructive Selling Agents
for
Southern Cotton Mills

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YARN MARKET

Philadelphia, Pa. — Gradually improving conditions were noted in the yarn market last week. Inquiry continued very active and buying was on a larger scale than during any week of the year. Spinners were firmer on prices and advances of half a cent a pound were generally in effect by the week end. Orders ranging as high as 75,000 pounds were reported frequently and smaller orders were more numerous.

The market noted sales of up to 300,000 pounds and many more smaller commitments were placed with mills and dealers, including those on carded and combed descriptions. The intention of many was to avoid losing advantages of covering on preferred makes and at prices that had already moved against buyers.

Weavers purchased ply yarns in counts ranging from 16s to 40s. On the index 20s two-ply 21c was "market" and customers were more willing to operate on this basis. The plush trade bought in lots up to 20,000 pounds in the closing days of the week.

In the knitting trade yarns of lightweight specifications are in greatest call. This business has been long delayed and this takes some of the edge off present activity, but dealers are hopeful of working off a good share of contracts in the next few weeks. Yarns going into heavier weight goods are inactive.

Knitters also had occasion to anticipate their needs on combed numbers, covering on numbers between 24s singles and 40s. For 24s at first as low as 32c was done on a lesser make and then up to 33½c was paid, while 40s brought 40c, a few 50s 45c and 36s 38c and 37½c. Up to 25,000 pounds were moved, as reported in the local.

There was a demand for double carded yarns in larger poundages and buyers came in for special yarns to serve particular purposes. These brought higher prices than applied before. The plush trade was said to have accustomed itself to paying a ½c more than before for what it required from 21¾c to 22½c for 20s. A few lots of carpet yarns sold, some at 16½c for 8s plied 5-pound break of tinged stock.

Southern Single Chain Warps	
10s	19½
12s	20
16s	21
20s	22
26s	25
30s	27
Southern Two-Ply Chain	
8s	19
10s	19½
12s	20
16s	21½
20s	22½
24s	25
30s	27½
36s	33
40s	35
40s ex.	39
Southern Single Skeins	
8s	19
10s	19½
12s	20
14s	20½
16s	21
20s	22
24s	24
26s	25
28s	26
30s	27
Southern Two-Ply Skeins	
8s	19
10s	19½
12s	20
14s	21
16s	21½
20s	22½
24s	25
26s	26
30s	27
40s	35
40s ex.	38
50s	45
60s	52
Duck Yarns, 3, 4 and 5-Ply	
8s	21½
10s	22
12s	23
16s	24
20s	25
Carpet Yarns	
Tinged Carpet, 8s, 3 and 4-ply	18
White Carpet, 8s, 3 and 4-ply	19½
Part Waste Insulating Yarn	
8s, 1-ply	16½
8s, 2, 3 and 4-ply	17
10s, 1-ply and 3-ply	17½
12s, 2-ply	18
16s, 2-ply	19½
20s, 2-ply	20½
26s, 2-ply	24
30s, 2-ply	25½
Southern Frame Cones	
8s	20
20s	20½
12s	21
14s	21½
14s	21½
16s	22
18s	22½
20s	22½
22s	23
24s	24
26s	25
28s	26
30s	27
40s	35

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FOR UNIFORMITY OF TWIST IN PLYS AND CORDS—
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for Equipment, Parts, Materials, Service

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AKRON BELTING CO., Akron, O. Sou. Reps.: L. L. Haskins, Greenville, S. C.; L. F. Moore, Memphis, Tenn.

AKTIVIN CORP., The, 50 Union Square, New York City. Sou. Rep.: American Aniline Products, Inc., 1003 W. Trade St., Charlotte, N. C.

ALLIS-CHALMERS MFG. CO., Milwaukee, Wis. Sou. Offices: 1102 Lexington Bldg., Baltimore, Md.; 905 Electric Bldg., Richmond, Va.; 1104 Healey Bldg., Atlanta, Ga.; 701 Brown-Marx Bldg., Birmingham, Ala.; 1118 Johnston Bldg., Charlotte, N. C.; 1124 Canal Bank Bldg., New Orleans, La.; 2412 Pinehurst Blvd., Shreveport, La.; 1515 Sante Fe Bldg., Dallas, Tex.; 1126 Post Dispatch Bldg., Houston, Tex.; 524 Alamo Nat'l. Bk. Bldg., San Antonio, Tex.

AMERICAN ENKA CORP., 200 Madison Ave., New York City. Sou. Reps.: R. J. Mebane, Asheville, N. C.; Cannon Mills (Yarn Dept.), Kannapolis, N. C.

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ARABOL MFG. CO., THE, 110 E. 42nd St., New York City. Sou. Agent: Cameron McRae, Concord, N. C.; Sou. Reps.: W. C. Gibson, Griffin, Ga.; W. L. Cobb, Greenville, S. C.

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ASHWORTH BROS., INC., Charlotte, N. C. Sou. Offices: 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S.W., Atlanta, Ga.; Texas Rep., Textile Supply Co., Dallas, Tex.

ASSOCIATED BOBBIN COS., composed of **BOWEN-HUNTER BOBBIN CO.**, East Corinth, Vt.; **THE DANA S. COURTNEY CO.**, Chicopee, Mass.; **VERMONT SPOOL & BOBBIN CO.**, Burlington, Vt. Sou. Rep., The McLeod Companies, which are: Atlanta Textile Supply Co., 695 Glen St., Atlanta, Ga., Greenville Textile Supply Co., Greenville, S. C.; Odell Mill Supply Co., Greensboro, N. C.

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LEWIS, JOHN D., Providence, R. I. Sou. Rep.: Chas. H. Stone, 822 W. Morehead St., Charlotte, N. C. (Warehouse).

LOCKWOOD-GREENE ENGINEERS, INC., 100 E. 42nd St., New York City. Sou. Office: Montgomery Bldg., Spartanburg, S. C., R. E. Barnwell, V. P.

MARSTON CO., JOHN P., 247 Atlantic Ave., Boston, Mass. Sou. Rep.: C. H. Ochs, Hotel Charlotte, Charlotte, N. C.

MATHIESON ALKALI WORKS, INC., 250 Park Ave., New York City. Sou. Plant, Saltville, Va., E. A. Hults, V.-Pres. Sou. Office: First Nat'l. Bank Bldg., Charlotte, N. C., Fred C. Tilson, Mgr. Sou. Reps.: E. M. Murray, E. M. Rollins, Jr., J. W. Ivey, and B. T. Crayton, Charlotte Office; R. C. Staples, Box 483, Chattanooga, Tenn.; Z. N. Holler, 208 Montgomery St., Decatur, Ga.; J. W. Edmiston, Box 570, Memphis, Tenn.; V. M. Coates, 807 Lake Park, Baton Rouge, La.; T. J. Boyd, Adolphus Hotel, Dallas, Tex.

MAUNEY-STEEL CO., 237 Chestnut St., Philadelphia, Pa. Sou. Reps.: Aubrey Mauney, Burlington, N. C.; Don L. Hurlburt, 511 James Bldg., Chattanooga, Tenn.

MERROW MACHINE CO., THE, 8 Laurel St., Hartford, Conn. Sou. Reps.: E. W. Hollister, P. O. Box 563, Charlotte, N. C.; R. B. Moreland, P. O. Box 895, Atlanta, Ga.

NATIONAL ANILINE & CHEMICAL CO., INC., 40 Rector St., New York City. Sou. Office & Warehouse: 201 W. First St., Charlotte, N. C., W. H. Willard, Mgr. Sou. Reps.; J. I. White, W. L. Barker, C. E. Blakely, Charlotte Office; J. T. Chase, American Savgs. Bk. Bldg., Atlanta, Ga.; H. A. Rodgers, 910 James Bldg., Chattanooga, Tenn.; J. E. Shuford, Jefferson Std. Life Bldg., Greensboro, N. C.; E. L. Pemberton, 324 Dick St., Fayetteville, N. C.

NATIONAL RING TRAVELER CO., 257 W. Exchange St., Providence, R. I. Sou. Office & Warehouse: 31 W. First St., Charlotte, N. C., Roy S. Clemons, Mgr. Sou. Reps.: C. D. Taylor, Gaffney, S. C.; L. E. Taylor, Charlotte Office; J. K. Moore, Gaffney, S. C.; H. L. Lanier, Shawmut, Ala.

NEWPORT CHEMICAL WORKS, Passaic, N. J. Sou. Offices & Warehouses: 226½ N. Forbis St., Greensboro, N. C., W. M. Hunt, Mgr.; Chamber of Commerce Bldg., Greenville, S. C., D. S. Moss, Mgr.; Newnan, Ga., Tom Taylor, Mgr. Sou. Reps.: H. J. Horne and J. V. Killheffer, Greensboro Office; E. H. Grayson, Gillespie Terrace, Chattanooga, Tenn.

NEW YORK & NEW JERSEY LUBRICANT CO., 292 Madison Ave., New York City. Sou. Office, 601 Kingston Ave., Charlotte, N. C., Lewis W. Thomason, Sou. District Mgr. Sou. Warehouses: Charlotte, N. C., Spartanburg, S. C., New Orleans, La., Atlanta, Ga., Greenville, S. C.

OAKITE PRODUCTS, INC., New York, N. Y. Sou. Dist. Office and Warehouses: Atlanta, Ga. L. W. McCann Div. Mgr., M. E. Patterson; Memphis, Tenn, R. H. Bailey; Greensboro, N. C., H. J. Canny; New Orleans, La., L. H. Gill; Richmond, Va., W. A. McBride; Augusta, Ga., E. Moline; St. Louis, Mo., J. C. Leonard, Div. Mgr., H. J. Steeb, C. L. Fischer; Dallas, Tex., W. B. Mix; Houston, Tex., G. C. Polley.

PARKS-CRAMER CO., Fitchburg, Mass. Sou. Office and Plant, Charlotte, N. C., W. B. Hodge, V.-Pres., M. G. Townend, Sou. Mgr. Sou. Reps.: W. H. Burnham, O. G. Culpepper and H. B. Rogers, Charlotte Office; J. F. Porter, P. O. Box 1355, Atlanta, Ga.

PERKINS & SON, INC., B. F., Holyoke, Mass. Sou. Rep.: Fred H. White, Independence Bldg., Charlotte, N. C.

PLATT'S METALLIC CARD CLOTHING CO., Lexington, N. C. U. S. Agent, F. L. Hill, Box 407, Lexington, N. C. Sou. Reps.: W. F. Stegall, Cramerton, N. C.; R. L. Burkhead, Varner Bldg., Lexington, N. C.

ROCKWEAVE MILLS, LaGrange, Ga., Wm. H. Turner, Jr., V.-Pres. and Gen. Mgr. Sou. Reps.: Carolina Specialty Co., Charlotte, N. C.; Hamner & Kirby, Gastonia, N. C.; J. M. Tull Rubber & Supply Co., 285 Marietta St., Atlanta, Ga.; Young & Vann Supply Co., 1725 First Ave., Birmingham, Ala.; Mills & Lupton Supply Co., Chattanooga, Tenn.; Nashville Machine & Supply Co., Nashville, Tenn.; Montgomery & Crawford, Spartanburg, S. C.; Sullivan Hdw. Co., Anderson, S. C.; Noland Co., Inc., Roanoke, Va.

SACO-LOWELL SHOPS, 147 Milk St., Boston, Mass. Sou. Office and Repair Depot, Charlotte, N. C., Walter W. Gayle, Sou. Agent; Branch Sou. Offices: Atlanta, Ga., Fred P. Brooks, Mgr.; Spartanburg, S. C., H. P. Worth, Mgr.

SARGENT'S SONS CORP., C. G., Graniteville, Mass. Sou. Rep.: Fred H. White, Independence Bldg., Charlotte, N. C.

SEYDEL CHEMICAL CO., Jersey City, N. J. Sou. Warehouse, Greenville, S. C. Sou. Reps.: W. T. Smith, Box 349, Greenville, S. C.; G. H. Brown, Browns, Ala.; I. G. Moore, 301 N. Market St., Dallas, Tex.

SEYDEL-WOOLLEY CO., 748 Rice St., N.W., Atlanta, Ga.

SHAMBOW SHUTTLE CO., Woonsocket, R. I. Sou. Rep.: M. Bradford Hodges, Box 752, Atlanta, Ga.

SIPP-EASTWOOD CORPORATION, Paterson, N. J. Sou. Rep.: Carolina Specialty Co., Charlotte, N. C.

SIRRINE & CO., J. E., Greenville, S. C.

S K F INDUSTRIES, INC., 40 E. 34th St., New York City. Sou. Offices: 598 Peachtree St., N.E., Atlanta, Ga., N. Miller, Dist. Mgr.; 1410 Johnston Bldg., Charlotte, N. C.; 2102 Jackson St., Dallas, Tex., H. L. Gaddis, Dist. Mgr., Sou. Reps.: M. H. Courtenay, L. H. Bailey, G. F. Langevin, Atlanta Office; R. W. Franklin, Charlotte Office; D. R. Crull, Paul H. Sisk, G. W. George, Dallas Office.

SOLVAY SALES CORP., 61 Broadway, New York City. Sou. Branch Office: 607 Bona Allen Bldg., Atlanta, Ga.; Sou. Reps.: Chas. H. Stone, 822 W. Morehead St., Charlotte, N. C.; Burkhart-Schier Chemical Co., 1202 Chestnut St., Chattanooga, Tenn.; Woodward Wight Co., 451 Howard Ave., New Orleans, La.

SONOCO PRODUCTS CO., Hartsville, S. C.

SOUTHERN SPINDLE & FLYER CO., Charlotte, N. C. Wm. H. Monty, Mgr.

STAFFORD CO., THE, Readville, Mass. Sou. Rep.: Fred H. White, Independence Bldg., Charlotte, N. C.

STANLEY WORKS, THE, New Britain, Conn. Sou. Office and Warehouse: 552 Murphy Ave., S.W., Atlanta, Ga., H. C. Jones, Mgr.; Sou. Reps.: Horace E. Black, P. O. Box 424, Charlotte, N. C.

STEEL HEDDLE MFG. CO., 2100 W. Allegheny Ave., Philadelphia, Pa. Sou. Office and Plant: 621 E. McBee Ave.; Greenville, S. C. H. E. Littlejohn, Mgr. Sou. Reps.: W. O. Jones and C. W. Cain, Greenville Office.

STEIN, HALL & CO., INC., 285 Madison Ave., New York City. Sou. Office, Johnston Bldg., Charlotte, N. C., Ira L. Griffin, Mgr.

TERRELL MACHINE CO., Charlotte, N. C., E. A. Terrell, Pres. and Mgr.

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TEXTILE MILL SUPPLY CO., 1200 S. Mint St., Charlotte, N. C.

TUBIZE CHATILLON CORP., 2 Park Ave., New York City. Sou. Reps.: E. D. Bryan, 614 E. Washington St., Greenville, S. C.; J. R. Morton, P. O. Box 1030, Greensboro, N. C.; W. B. Purse, Provident Bldg., Chattanooga, Tenn.

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VISCOSE CO., Johnston Bldg., Charlotte, N. C., H. Wick Rose, Mgr.

VOGEL CO., JOSEPH A., Wilmington, Del. Sou. Office: St. Louis, Mo.

WATSON-WILLIAMS MFG. CO., Millbury, Mass., and Leicester, Mass. Sou. Rep.: George F. Bahan, P. O. Box 581, Charlotte, N. C.

WHITIN MACHINE WORKS, Whitinsville, Mass. Sou. Offices: Whitin Bldg., Charlotte, N. C., W. H. Porcher and R. I. Dalton, Mgrs.; 1317 Healey Bldg., Atlanta, Ga. Sou. Reps.: M. P Thomas, Charlotte office; I. D. Wingo and C. M. Powell, Atlanta office.

WHITINSVILLE SPINNING RING CO., Whitinsville, Mass. Sou. Rep.: Webb Durham, 2121 East 5th St., Charlotte, N. C.

WICKWIRE-SPENCER STEEL CO., 41 E. 42nd St., New York City. Sou. Rep.: James A. Greer, 50 Rutherford St., Greenville, S. C.

WOOD'S SONS CO., T. B., Chambersburg, Pa. Sou. Reps., The McLeod Cos., which are: Atlanta Textile Supply Co., 695 Glen St., Atlanta, Ga.; Greenville Textile Supply Co., Greenville, S. C.; Odell Mill Supply Co., Greensboro, N. C.

Tennessee Studies Employment Situation

Chattanooga, Tenn. — T. T. McKinney, manager of the Standard-Coosa-Thatcher spinning plants, testified as to operations of his company, with representatives of Chattanooga's industries and farmers of Hamilton county who appeared at the hearing held here by the legislative recess committee on unemployment and agriculture and gave their views. The manufacturers told of efforts in Chattanooga to better the unemployment situation and working conditions, while the farm delegation stressed the need of product standardization.

Mr. McKinney stated that the feeling between the employers and employes of this company was excellent and the company operated on as full a schedule as possible so as to aid the workers.

Senator A. J. Graves asked Mr. McKinney his opinion of a legislative bill being considered that would abolish night work for women and children of a certain age.

"We do not work children at present," replied Mr. McKinney, "but to put over a bill like that would throw thousands of women throughout the country out of work. It would have a bad local effect."

Senator Graves assured Mr. McKinney that the bill was only being considered.

To Promote Wash Dress Week

Many new cotton weave will receive their first public presentation during National Wash Dress Week, which will be held April 20 to 25 in representative American stores from coast to coast, the National Association of Cotton Dress Manufacturers announce. The purpose of National Wash Dress Week is to demonstrate how far a woman's clothing dollar will stretch when invested in those smart economical frocks. Accordingly, there will be a nation-wide showing of the newest wash fabrics and the newest types of dresses specially styled for these new colorful materials.

Leading designers have created special models for National Wash Dress Week. According to advance information, lingerie touches and embroidery touches will play an important part in the styling of these dresses. Belts will be of varying widths, from narrow to extremely wide. Many dresses are going to emphasize the new short packets. The trend toward pleats will be distinctly noticeable, as will the new vogue of the short sleeve. The feminine mode still prevails.

There will be a preliminary National Wash Dress Week showing in the Hotel Stevens at Chicago before the National Association of Cotton Dress Manufacturers on March 3, 4 and 5. On this occasion Miss National Wash Dress Week will make her first appearance.

In order to help the stores of the country to identify themselves with this nation-wide fashion event, special advertising material has been prepared. There also are window displays, streamers, pennants, folders for general distribution to the public and mats for newspaper advertising. This advertising material may be obtained from the International Association of Garment Manufacturers, 395 Broadway, New York, at the nominal price of $1 a set.

Textile School To Hold Style Show

For several years the State College Textile School has conducted a style show at Raleigh for three distinct purposes: first, to demonstrate diversification of fabrics that can be made from combinations of rayon and cotton, and also to hasten the return of cotton fabrics to popular favor; second, to demonstrate the untility and beauty of fabrics designed and woven in the Textile School by textile students; third, to show the efficient results obtained by the home economics departments of North Carolina colleges.

These style shows have attracted wide attention and each year the attendance has materially increased. This year the annual event will be held on April 16th and students from the following institutions will participate: Meredith College, Raleigh; Queen's College, Charlotte; Eastern Carolina Teachers College, Greenville; Catawba College, Salisbury; Louisburg College, Louisburg; Peace Institute, Raleigh.

More than 60 young ladies will wear dresses which they have made, as a part of their regular class work, from fabrics designed and woven by textile students and supplied to them by the Textile School.

HOME SECTION

Edited by Mrs. Ethel Thomas—"Aunt Becky."

Traveling Among the Mills

Stanley, N. C.—Lola Mfg. Co.

We've said for 20 years, and stick to it, that we've never seen a Bumgarner who wasn't progressive. During all our years with Mill News and since, whenever we found a "Bumgarner" as superintendent or overseer of a cotton mill, we found men who were worth meeting.

Recently, we were honored by an invitation to dinner, in the pretty home of Mr. and Mrs. W. L. Bumgarner, of Lola Mfg. Co., and truly enjoyed their hospitality. Mr. Bumgarner is master mechanic.

Mrs. Bumgarner is a great lover of flowers and has the largest cactus we have ever seen—a big tub full,—in bloom. We got a picture of it, which we hoped to reproduce in this paper, but the engraver says it is not clear enough to show up satisfactorily. We hope to have good luck with the cuttings Mrs. Bumgarner gave us.

C. H. Potter is manager, Lola Mfg. Co., I. E. Craig, assistant; J. O. Withers, general overseer; F. H. Morris, carder; F. D. Lowe, spinner.

Superintendent C. H. Carpenter and Family, of Cherryville Mfg. Co., Cherryville, N. C.

Who can show a finer family all at home and sticking their feet under mother's table three times a day? And note how young and happy the parents look! Mr. Carpenter is 43 and the only father we've ever seen who could give the correct ages of his children. If any other superitnendent can show a finer family group than the above eight sons and two daughters, we'd like to have it. Hurrah for the Textile South!—*Aunt Becky.*

Hickory, N. C.—Many New Buildings

The Shufords own and control a lot of business in Hickory. On entering the town we found that a new knitting mill had gone up since our last visit. All over the town, we found evidence of progressiveness in new and re-modeled buildings, and in busy textile machinery.

HICKORY SPINNING CO., has always been one of our pleasant stopping places, and here we found an entirely new set of officials, and met the genial young secretary and treasurer, A. A. Shuford, Jr., J. A. Allred, of Granite Falls, is superintendent. W. M. Martin, carder, J. A. Dale, spinner; F. J. Dale dyer, E. O. Miller, master mechanic.

Finding that our Mr. Still had been to all the mills in Hickory a few days previous, we hurried on to Rhodhiss, a delightful mill town, where we always go with pleasure and regret to leave.

Rhodhiss, N. C.—Rhodhiss Mills Co.

This is one of the most picturesque places in Western North Carolina. It is on the banks of the Catawba River, with majestic hills as a background; almost shakes hands with Granite Falls and Hickory, Lenoir and Morganton are easily acessible over paved roads.

There are two splendid mills at Rhodhiss and no better officials or overseers can be found in the State. The grounds about No. 2 are beautiful with well-kept evergreen hedges, which were set out three or four years ago under the direction of T. M. McIntyre, who was then superintendent.

Clarkson Jones, an excellent young man, formerly office manager, has recently been promoted to general manager of Rhodhiss Mills Co. His home crowns the loftiest eminence, and is charming and artistic in every detail of furnishings. He and his mother live there alone, and a colored chef in spotless linen, cooks and serves elegant meals. Mr. L. A. Elmore and I were guests at luncheon in this home, and we know. We certainly advise Mr. Clarkson Jones' best girl to use every art to make him pop the question—if he hasn't already done so.

J. O. Edwards, formerly at Icemorlee, Monroe, N. C., has been superintendent the past few years, and by his everyday walk and Christian spirit, has won the hearts of all the employees.

Mr. Jones and Mr. Edwards never tire in constructive work and are both teaching textile classes at night. Mr. Edwards has never missed a copy of the Southern Textile Bulletin.

Both mills are running nicely and are in good condition, and the operatives look healthy and happy. Some of the spinners will tip the beam around 200 pounds, we believe.

MILL No. 1: W. W. Hinson, carder, W. A. Woods, second hand; J. M. Kelley, spinner, F. E. Queen, second hand; Q. A. Fite, spooler section; J. J. Hyder, weaver, E. E. Ford, second hand; J. A. Williams, night weaver; N. Y. Monteith, overseer cloth room.

MILL No. 2: L. A. Elmore, carder, G. F. Woods, second hand; T. L. Benefield, spinner, James Hoyle, second hand; R. J. Champion, section on spoolers; H. L. Holcomb, weaver, C. F. Kirby, second hand; G. E. (Red) Stephens, overseer cloth room; J. G. Poovy, warehouse man; H. C. Cobb, shipping; M. T. Mullinax, master mechanic for both mills; A. C. Holler, outside overseer.

Our friend, Mr. L. A. Elmore, has bought ten acres out in the country; where he proposes to "fence in" his five boys.

Newton, N. C.—A Very Busy Town

It is said that Newton has suffered very little from the general depression; that the mills have run wonderfully well, with business good.

As our Mr. Still had just made a visit here, there was little for us to do except meet and greet friends.

We never fail to see Superintendent C. L. Kirby, at Catawba Cotton Mills. W. M. Bost is carder; J. B. Watson, spinner; and Robie Bumgarner, master mechanic.

Had looked forward to seeing the officials of Clyde Mills, Inc., and Superintendent Allan Jones, but all were out of town.

Henrietta, N. C.—Henrietta Mill No. 1

Gee, what a nice place this is, with that well known and efficient gentleman, T. J. Bagwell on the job as superintendent. There's nobody in a rut here, believe us!

And such a live bunch of overseer—every one interested in his job—and all pulling together.

Some spinners are making $18.00 per week. One girl —probably the champion spinner—runs 22 frames—108 spindles to the side, and the work runs so perfectly that it seems almost like play.

Henrietta Basketball team is competing for Western North Carolina championship in class B.

Church and Sunday school work claims the interest and support of the majority, and Henrietta is a fine community. It was a genuine pleasure to vist there.

The overseers are: N. J. James, overseer day carding, J. L. DeBrule, at night; C. W. Wilbanks, day spinner, J. O. Campbell, at night; R. H. King, day weaver, W. L. Brown at night; Roy Howell, cloth room overseer; H. W. Berry, master mechanic; W. H. Ward, outside man.

Lenoir, N. C.—Lenoir Cotton Mills and Steel Cotton Mill Co.

Lenoir was a genuine surprise to us. It is one of the prettiest towns in Western North Carolina, and Carlheim Hotel is one of the nicest to be found. The proprietor and wife, Mr. and Mrs. Myers, are interested in making guests feel at home and a part of the family; and, with such a genial atmosphere and excellent dining room service, it is no wonder that the place is extremely popular and business of the best.

We visited the commodious mill offices in town, and met Assistant Treasurer J. L. Nelson, Jr. These offices are headquarters for the Caldwell Cotton Mills and Hudson Cotton Mfg. Co., of Hudson, and for Lenoir Cotton Mill Co., and Moore Cotton Mill Co., of Lenoir, and the Nelson Cotton Mill Co., and Whitnel Cotton Mill Co., of Whitnel.

Lenoir Cotton Mill was the only one of this group we visited. S. H. Sherman is general superintendent; C. L. Adkins, assistant carder and spinner, and a very courteous and pleasant gentleman. H. C. Walker, night overseer. The mill runs full time, day and night, making an excellent grade of combed and carded peeler yarns.

STEELE COTTON MILL CO., where our friend, P. A. Carpenter is superintendent, does not belong to the Nelson group. R. L. Steele is president; T. H. Broyhill, secretary and treasurer; F. A. Thompson, buyer. Mr. Carpenter gave us a heart warming welcome.

N. L. Baker is carder; W. H. Hartsoe, spinner; W. H. Walker, twister, C. V. Jones, master mechanic.

This mill runs 55 hours per week, and is very clean and sanitary. The product is plush yarns.

This mill has no village, but owns houses all over Lenoir, which are occupied by employees. We enjoyed our visit here very much.

Granite Falls, N. C.—Granite Cordage Co.

The Largest Braided Cord Mill in the United States

We had never before seen anything just like this;—thousands and thousands of miles of sash cord, made on hundreds of braiders where big spools gaily danced the "Virginia reel," while other hundreds were doing the "May pole" dance, to the music of humming machinery. Truly it was an interesting sight.

D. M. Cline, assistant superintendent, said he remembered the big ovation given us at the Textile banquet in Greenville, S. C., last fall and was convinced the "Aunt Becky" must be a general favorite in the South. He was very courteous, showed us over the mill, and presented us with a big generous ball of nice glazed cord as a souvenir of our visit.

Bidding Mr. Cline goodbye, we left the mill and was going down toe railroad to the street, when we met the big general superintendent, J. M. Allred, coming in.

"Who are you—where've you been, and where are you going?" he wanted to know. Probably thought I was a labor union forerunner,—or perhaps he saw that ball of cord! We tried to dodge him behind a coal pile, but found we couldn't get around that way, so we meekly came back and weakly squeaked out an introduction. And that fixed things. My! What a welcome "Becky Ann" received. No doubt he'd have given us a clothes line, had we intimated that we needed one! Anyhow, he's a genial gentleman, and we were delighted to meet him.

Mr. Allred is a subscriber to the Bulletin, that's probably why he is such a successful textile man, and general superintendent of so many mills!

There are several mills here, and at other places, under his supervision, and all doing well.

GRANITE FALLS MFG. CO., No. 1 and No. 2, with J. A. Starnes carder, and A. A. Clay, spinner. GRANITE CORDAGE CO., with W. A. Yount, overseer carding, and ALLRED MILL (I believe that's the name), where E. L. Holler, is the efficient and up-to-date carder and spinner.

Falls Mfg. Co. was standing Wednesday, February 18th for the funeral of Harvey L. Fox, overseer of carding and spinning, who had died suddenly on Monday or Tuesday.

CLASSIFIED ADS.

Wanted

Position as office manager, bookkeeper. Expert in credits and collections. Twelve years experience assistant to president and treasurer of yarn mill. Thirty-seven years old. Will go any where for interview. Address T. M. S., P. O. Box 441, Kinston, N. C.

Want position as overseer weaving. Several years experience on all kinds plain, and twills. Good references. Address "C. C. W. G.," care Southern Textile Bulletin.

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Cloth Room Overseer Wanted

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Cone 2.20-Yard Denims Advance To 12 Cents

Cone Export & Commission Co. has sent out notices to the trade that denim prices were being advanced ½c to a basis of 12c for 28-inc 2.20-yard whitebacks. A considerable additional business was booked during the course of the last few days. Manufacturers have found occasion to cover more appreciably than they did in some time past, based on their ability to move increased quantities of overalls and other work garments made of the denims.

In offering yardage on the firmer basis through March, April and May buyers are understood to have taken advantage of the opportunity to purchase that far off, thus protecting themselves against possible danger of additional firmness threatened through the susutained strength of the raw cotton market and the broadening demand for gray and finished cotton cloths.

The new price, from a manufacturing standpoint, is viewed as stimulating, since it brings to a close the period of deflation that has obsessed the industry since a year ago. Garment buyers are counted on adding materially to their purchases, especially so since manufacturers have felt the competitive pressure so long that they, almost as a unit, are pleased to find a new and stronger trend favoring their operations.

Black Speaks To Students

The North Carolina State College Junior Section of Textile Chemists and Colorists had as their guest recently, at the Textile School, James W. Black of the Ciba Company. Mr. Black graduated from State College in 1929, and is now a salesman for Ciba Company.

He gave two very interesting lectures to the members of the junior and senior classes of the Textile School, on "Color Matching in the Dye Manufacturer's Laboratory," and "Application of Vat Dyes on Padding Machines," which were received with much interest. The lectures were illustrated by drawings on the blackboard and by samples.

In the dye house of the Textile School, Mr. Black demonstrated skein dyeing by use of Cibanone Blue R, on yarn used in the weaving department of the school. He showed the students particular methods of dyeing the yarn with the vat dye and pointed out important points relative to temperature, dissolving and reducing the dye.

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The unique construction of the new Goodyear Thor Belt, seamless, permits hard wear on edges without fraying out. The wrap envelope encloses the carcass built of plies, and rigidly armors the edges from damage in shifting. Thor is made of heavy sliver-duck—strong at the fasteners. This is the rugged belt you have needed for frames, looms, spoolers, twisters.

Other Goodyear products for Textile Mills which we carry in stock include the Goodyear Compass (Cord) Textile Endless Belt, Goodyear Emerald Cord Multiple V Belts, and Goodyear Wingfoot Air Hose.

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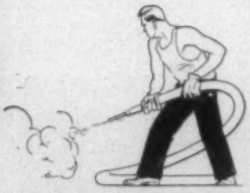
Vogel Number Ten-A Seat-Action Closet Combination

THEY ELIMINATE THE JOB THAT NOBODY WANTS



CLOSETS in plants and factories should be completely gone over every night, and it's a job nobody wants.

Here's the solution:

Install Vogel Number Ten-A Closets, furnished with hard rubber or composition seats. Then just turn live steam on them as often as you wish. You can't hurt them and it keeps them bright and new-looking.

Catalog sent promptly upon request.

JOSEPH A. VOGEL COMPANY

Wilmington, Del. St. Louis, Mo.

VOGEL PATENTED *Products*

INSTALLED BY PLUMBERS EVERYWHERE

Yours for the Asking! this $1,000,000 Service

That's what it is—as advertised. Although it has taken us a little more than a century to gradually build it. Our technical service today has cost us close to a million dollars. As makers and distributors of products that play such a vital part in the textile industry, we must know to an absolute certainty just what our products can or cannot do for our clients.

This service is particularly adapted to your specific textile needs and is available any time to assist in solving your problems.

Sizing Compounds

For weighting and finishing all textiles

A. H. Gum

Asace Gum

Dighton Artificial Gum

Rosin Size

Our Products

- Sizing Gums
- Sizing Compounds
- Softeners
- Soluble Gums
- Soluble Oils
- Soaps
- Dextrines
- Colors
  - Pigment and Lake
- Chemicals (Belle Brand)
  - Liquid Chlorine
  - Chlorine Lime (Bleaching Powder)
  - Caustic Soda

Arnold, Hoffman & Co., Inc.

Chemists to the Textile Industry

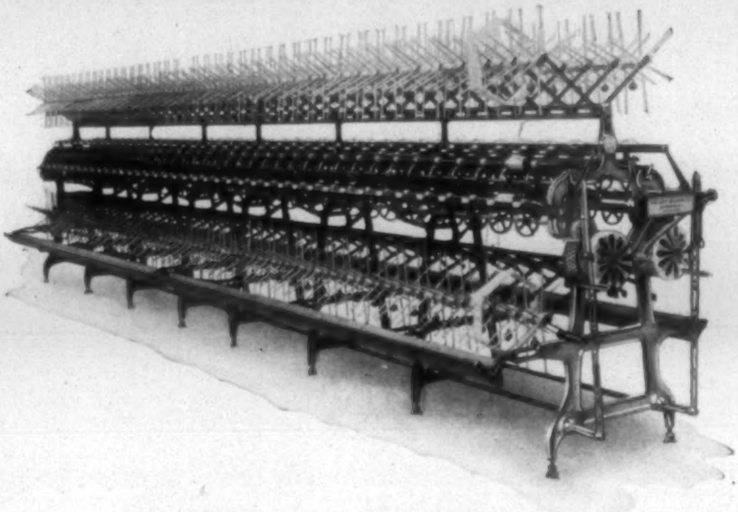
Providence Charlotte Philadelphia
New York Boston

THE PERFECT DOUBLE DECK WINDER

Completely equipped with oil-less spindle bearings and driving shaft bearings

. . for silk, rayon, and fine counts of cotton.

The oil-less bearings render the use of oil or grease entirely unnecessary.



Another interesting feature of this machine is the fact that it is constructed with TWO rows of spindles and driving pulleys, one row being set back of and above the other. This is in contrast to the method, employed in other makes of double deck winders, of using only ONE row of large pulleys to drive two rows of spindles; a common trouble with which method has been that the yarn from the upper swifts would cross and wind on the bobbins of the lower deck.

These features mean that users of Sipp-Eastwood Double Deck Winders get better wound spools, and avoid waste of material and time—in addition to getting the same number of spindles in practically half the floor space required for single deck winders.

ITS A SIPP EASTWOOD
TRADE MARK

SIPP-EASTWOOD
CORPORATION

Winders, Warpers, Re-beamers, Quillers
Folding Machines, Edge Warpers
KEEN & SUMMER STS., PATERSON, N. J.
Representatives:
SOUTH
Carolina Specialty Co., Charlotte, N. C.
NEW ENGLAND
Joseph Barnes, New Bedford, Mass.
ENGLAND
Textile Acessories, Ltd., Manchester

SIZING RAYON ON COTTON WARP SIZERS

IN the past few years many cotton mills have found it necessary to use special machines for processing rayon. Most of these mills have been very successful.

Others have tried to adapt their cotton machines to processing rayon, spending many thousands of dollars in the effort. Eventually, however, they, too, have found their cotton machinery inadequate and have replaced many of their cotton sizers, for example, with the improved Johnson Rayon Warp Sizer.

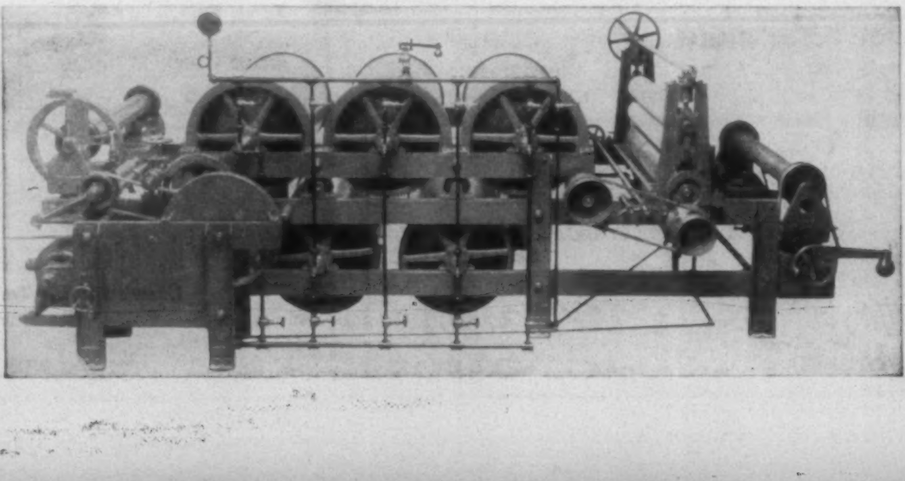
Many concerns who did not make this and other necessary changes have gone into "the red" or out of business completely. They could not compete with mills equipped with the proper machinery.

Now that the Southern mills have gone into weaving finer rayon fabrics they have encountered similar difficulties in using their old cotton machinery. They have been experimenting, as have the cotton mills in New England and other sections, and as a result several have recently bought Johnson Warp Sizers.

Why experiment further? Why not follow the example of those who are successful? Profit by using either our three or five-cylinder sizer, which is used by leaders in the industry the world over.

Write today for full details.

Below we illustrate our 5-cylinder sizer.



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